UNIVERSITY OF ALBERTA

A SOCIAL STUDY OF STUDENT REPORT CARDS

by

SHIRLEY CHAPMAN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFULMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF SECONDARY EDUCATION

EDMONTON, ALBERTA

(FALL, 1989)

UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR: SHIRLEY CHAPMAN

TITLE OF THESIS: A SOCIAL STUDY OF STUDENT REPORT CARDS

DEGREE: DOCTOR OF PHILOSOPHY

YEAR THIS DEGREE GRANTED: 1989

PERMISSION IS HEREBY GRANTED TO THE UNIVERITY OF ALBERTA LIBRARY TO REPRODUCE SINGLE COPIES OF THIS THESIS AND TO LEND OR SELL SUCH COPIES FOR PRIVATE, SCHOLARLY OR SCIENTIFIC RESEARCH PURPOSES ONLY.

THE AUTHOR RESERVES OTHER PUBLICATION RIGHTS, AND NEITHER THE THESIS NOR EXTENSIVE EXTRACTS FROM IT MAY BE PRINTED OR OTHERWISE REPRODUCED WITHOUT THE AUTHOR'S WRITTEN PERMISSION.

S. Chapman.........

Edmonton, Alberta, Canada

Date: Oct. 13, 1989

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

THE UNDERSIGNED CERTIFY THAT THEY HAVE READ, AND RECOMMEND TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH FOR ACCEPTANCE, A THESIS ENTITLED

A SOCIAL STUDY OF STUDENT REPORT CARDS

SUBMITTED BY SHIRLEY CHAPMAN

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF DOCTOR OF PHILOSOPHY

J.H. Parsons

Supervisor: Dr. Jim Parsons

Dr. Larry Beauchamp

Dr. Wallie Samiroden

J. Jagodzinski

Dr. Jan Jagodzinski

Don Massey

Dr. Don Massey

H.H. Skolrood

Dr. Harold Skolrood

Date: Oct. 10, 1989

ABSTRACT

The purpose of this study was three fold. First, the study attempted to detect, expose, and critically reflect upon the presence of dominant metaphors found in student report cards. Second, the study attempted to understand how the metaphorical language revealed the world of schooling more clearly. Third, the study attempted to understand how student report cards reflected our society's cultural values. The goal of this research was to highlight the dominant metaphors existing in the formal printed documents used for the evaluation of students. Eighty student report cards were selected from the 1987 Alberta districts' report cards.

The study is divided into three parts. Chapters 2-4 discussed the fundamental principles of metaphor, conceptual metaphor, and some metaphors found in education. Chapter five reviewed the educational literature about student report cards. Chapters 6-9 discussed those metaphors evident in student report cards and education. The last part of this study discussed how student report cards acted as a model and myth of education and Canadian culture.

Four major metaphors were found in student report cards: (1) evaluation, (2) industrialization, (3) competition and winning, and (4) socialization. These metaphors were

interrelated and multi-faceted. Each illustrated one view of the cluster concept, student report cards.

Not only are student report cards a model of Alberta's educational system and Canadian culture, they are a myth. They are believed to be the only model of evaluation. No genuine change in student report cards can take place unless we understand them differently. By understanding student report cards differently, we can also know evaluation, education, students, schooling, and our culture differently.

This study is not the interpretation of either student report cards, schooling, education, or our culture, it is an interpretation. This interpretation represents my attempt to study Canadian culture using student report cards as the context and metaphor as analysis.

Acknowledgments

The writer wishes to express her sincere gratitude to Dr. James Parsons, advisor to this study, for his assistance, encourgement and direction of this investigation. Thanks are also expressed to Dr. Larry Beauchamp, Dr. Wallie Samiroden, Dr. Jan Jagodzinski, Dr. Don Massey and Dr. Harold Skolrood for serving on the Thesis committee.

TABLE OF CONTENTS

CHAPTER 1

Introduction 1

A. Statement of the Problem 5

B. Outline of Methodology 7

C. Assumptions 9

D. Limitations 10

E. Delimitations 10

F. Summary 11

CHAPTER 2

A Metaphorical Examination of Metaphor 12

A. Introduction: What is Metaphor? 12

B. Fundamental Principles of Metaphor: How metaphor works? 17

C. Metaphorical Examination of Metaphor 17
  sort-crossing 17
  types of metaphor 21
  levels of comprehension in metaphor 25
  the process of metaphor 29
  stages in the life of metaphor.......................... 35
  tension theory 40

D. Conclusion 46
  about the tulip 47

CHAPTER 3

Conceptual Metaphor 53

A. Conceptual Theories of Metaphor 54
  displacement of concepts 55
  metaphorical and non-metaphorical theory 59
  cluster metaphor 60
  transformation theory 64
  root-metaphor theory 69

B. An Awaremenss of What Metaphor Does 75
  major uses of metaphors 75
  other uses of metaphor 88
  misuses of metaphors 89

C. Summary 99

CHAPTER 4

Metaphors in Education 103

A. Introduction 103

B. Metaphor Applied in Education 104

C. Why use Metaphor in Education? 115

D. Summary 116

CHAPTER 5

Literature Review of Student Report Cards 118

A. Introduction 118

B. The Function of Student Report Cards 118

C. Problems with Student Report Cards 121

D. The History of STudent Report Cards 127

E. Charactertists of Student Report Cards 128

F. Evaluation Systems Used on Student Report Cards.. 132

G. Types of Reporting Systems 134

H. Effective Report Cards 135

I. Summary 137

CHAPTER 6

Physical Content Analysis of Alberta Report Cards 139

A. Chapter Overview 139

B. Introduction 139

C. Part one: Preliminary Information 141
  number of report cards in this study 141
  number of student report cards per year 144
  superintendent's messages 145
  reporting student progress 147
  parent signature requirement on report cards .. 150
  attendance and lates on report cards 150
  key words used in student evaluation 150

D. Part two: Body of the Student Report Card 163
  rank order of subjects 163
  Language Arts 166
  Mathematics 173
  Social Studies 174
  Science 175
  Physical Education 176
  French 177
  other subjects 178

E. Summary.. 180

CHAPTER 7

Reflections on Student Report Cards 182

A. Work and Time 182

B. Socialization 186

C. Segmentation of Knowledge 190

D. Learning and Knowledge are Sequential 192

E. Standardization 193

F. Evaluation and Judgment: Assumed Public Knowledge 195

G. Useful Information to Parents 198

H. Summary 200

CHAPTER 8

Work: A Major Metaphor in Education 201

A. Introduction 201

B. Historical Development of the Work Metaphor 201
  early development of the metaphor "work" 201
  later development of the metaphor "work" 207

C. Work: A Root-Metaphor in Eduction 212
occupation 212
sex 213
time 213
segmentation 216
sequentiality 219
volume 221
efficiency 222
motivation 224
standarization 225
support professionals 227

D. Summary.. 229

CHAPTER 9

The Development of Other Metaphors in Education 230

A. Evaluation 230
scale: the metaphor 230
scale: the influence in education 232
scale: judgment in education 237

B. Competition and Winning 240

C. Socialization 242

D. Summary 246

CHAPTER 10

Understanding Student Report Cards Metaphorically 248

A. Introduction 248

B. Eight Questions and Answers 249

C. Conclusion 270

CHAPTER 11

Summary, Impliciation, and Discussion 271

A. Introduction 271

B. Summary of the Chapters 272

C. Implication of this Study on Education 276

D. Further Research 280

E. Discussion of the Research........................ 283

F. Conclusion 286

Bibliography 287

LIST OF TABLES

CHAPTER 5

Table V-1 History of the Types of Report Cards ... 129

CHAPTER 6

Table VI-1 Types of Jurisdictions that Responded to the Request for Report Cards .. 140

Table VI-2 Number of Evaluation Systems used on Report Cards ... 142

Table VI-3 Types of Evaluation Systems Used at Different Divisions of Schools 143

Table VI-4 Types of Evaluation Systems Used at the District Level 143

Table VI-5 Frequency of Reportings per Year 144

Table VI-6 Frequency of Evaluation Systems Reporting Student Effort 151

Table VI-7 Effort Comments From Report Cards 152

Table VI-8 Frequency of Evaluation Systems Reporting Social Awareness 155

Table VI-9 Frequency of Reporting Social Awareness Remarks 157

Table VI-10 Frequency of Evaluation Systems Reporting Student Work Habits 158

Table VI-11 Frequency of Elementary Work Habits Comments 160

Table VI-12 Frequency of Junior High Work Habits Comments 161

Table VI-13 Frequency of Senior High Work Habits Comments 162

Table VI-14 Frequency of Positive, Negative, and Neutral Work Habits Comments on Report Cards 163

Table VI-15 Frequency of Subjects Listed on Report Cards Giving a Rank Order in Elementary School .. 164

Table VI-16 Frequency of Subjects Listed on Report Cards Giving a Rank Order in Junior High School .. 165

Table VI-17 Frequency of Evaluating "Written Expression" Concepts in Language Arts 168

Table VI-18 Frequency of Evaluating "Reading" Concepts in Language Arts 169

Table VI-19 Frequency of Evaluating "Speaking" Concepts in Language Arts 170

Table VI-20 Frequency of Evaluating "Listening" Concepts in Language Arts 171

Table VI-21 Frequency of Evaluating "Spelling" Concepts in Language Arts 172

Table VI-22 Frequency of Evaluating "Printing/Writing" Concepts in Language Arts 172

Table VI-23 Frequency of Evaluating "Mathematical" Concepts in Mathematics .. 173

LIST OF FIGURES

CHAPTER 2

Figure II-1 The Life of Metaphor 23

Figure II-2 Interaction of Metaphor 27

Figure II-3 The Process of Metaphor 29

Figure II-4 Resolution 33

Figure II-5 Fresh or "Radical" Metaphor 43

Figure II-6 Old or Established Metaphor 43

Figure II-7 Dead or Fossil Metaphor 43

Figure II-8 Chapman's Tulip Bulb Metaphor 49

Figure II-9 Figurative Language 50

Figure II-10 Metaphors Fundamental Principles 51

Figure II-11 Metaphors Fundamental Principles 52

CHAPTER 3

Figure III-1 Understanding Conceptual Metaphor 100

Figure III-2 Understanding Conceptual Metaphor 101

Figure III-3 All Language and Cognition is Metaphoric 102

CHAPTER 4

Figure IV-1 Metaphoric Conception of Education 111

Figure IV-2 An Extended Metaphoric Conception of Education ... 113

LIST OF NOMENCLATURE

These definitions are in the order of use in the thesis.

metaphor: a device for seeing something in terms of something else

sort-crossing: the giving to one thing a name that belongs to something else

epiphor: a metaphor that *expresses* experiences that are parallel to that of the reader-listener's experiences

diaphor: a metaphor that *suggests* possible meaning rather than expressing meaning

subject: the situation, person, or object the metaphor applies to; may be implicit or explicit

item for association: the related idea or object with which the subject is associated by means of the metaphor

tenor: the principal subject; the subject of the metaphor as understood by the maker or receiver of the metaphoric statement

vehicle: the subsidiary subject; the thought of the subject (tenor) and the thought of the item for association (vehicle) psychologically the appearance and the sense of a metaphor

sort-trespassing: a misuse of metaphor; to believe that something is the case; the taking of the metaphor literally

qualifiers: the forces which formulate line of association and which determine who interpretant's are associated by reader-listener; there are four classes

contextual qualifiers: (1st class) qualifiers resulting from linguistic or situational context in which a metaphor occurs

communal qualifiers: (2nd. class) arises out of the funded knowledge - the common experiences, traditions, or folk ways of the society archetype qualifiers: (3rd. class) depends upon experiences common to people of many races and ages; a metaphor repeated so often it seems to be a universal idea or truth

private qualifiers: (4th. class) supplied by the reader-listener based on personal or subjective association

tension: the emotional shock produced in the reader-listener by an intentional misuse of the language; sometimes called the lines of association; an extension of the weaver metaphor (Plato's metaphor), the degree of being stretched or the degree of tightness or looseness, high/low tension

radical/new metaphor: where the lines of association (tension) are long; a new metaphor where a high state of tension exits

old or established metaphor: where the lines of association (tension) are short and slack

dead/faded/fossilized/frozen metaphor: where the metaphor becomes part of the ordinary language; the tension and absurdity of the metaphor is no longer felt by the reader-listener; the stimuli which produces responses ceases to be "metaphoric" after a time; the metaphor is taken as literal

stale metaphor or threadbare metaphor: this metaphor does not completely assimilate into the community's stock of literal or designative signs

displacement of concept metaphor: the process of carrying over an old theory to a new situation; there are four stages stereoscopic of ideas/stereoscopic vision: the ability to entertain two different points of view at the same time

transposition: (1st. stage) the making of the metaphor

interpretation: (2nd. stage) the assignment of a concept from the old cluster to a specific aspect of the new situation

correction: (3rd. stage) the cultural adaption in which the old theory and the new concept structured situation are modified in various ways so as to suit one another

spelled-out: (4th. stage) an attempt is made to work out the relationships between the senses orientational metaphor: concepts that are seen as linear

ontological metaphor: involving the projection of entity or substance states on something that does not have that status inherently

structural metaphor: involving the structuring of one kind of experience or activity in terms of another kind of experience or activity

root metaphor: the most basic assumptions about the nature of the world or experiences that we make when we try to give a description of them

eclecticism: the attempt to interpret facts by means of incompatible sets of categories; categories generated from different root metaphor

generative metaphor: carrying over of frames or perspectives from one domain of experience to another; comes from the word "generate"

myth: a misuse of metaphor: adopting of a theory as the literal description of how things are

conduit metaphor: the treating of the language as a carrier of ideas, thought, or aspirations

model: analogy; an interpretation; representations or likenesses, of certain aspects of complex events, structures, or systems, made by using symbols or objects which in some way resembles the thing being modeled

replica model: looks like the thing being modeled

symoblic model: the flow of information from one element in the system to another

CHAPTER 1

THE INTRODUCTION

The report card is the universal form for reporting student achievement to parents and society in general. Yet the student report card has not changed substantially in North America since the turn of the century (Chansky, 1975). Despite its universal nature, the report card is not without controversy. Mannello (1969) believes student report cards are the greatest obstacles to effective education. Others have called them "the most destructive, demanding, and pointless thing in American education?" (Time, November 1972).

The student report card system creates needless anxiety, shame, and disappointment for many students and parents; it destroys student self-concepts; and it does not accurately reflect student growth (Gilman, 1974; Leary, 1975). Leary (1975) suggests that because society so clearly identifies with labels, rating scales, and grading of products educators allow and encourage report card grades. As such, report cards represent a natural extension of cultural hegemony.

As a classroom teacher with many years of experience, I evaluated thousands of students. Often, however, student report cards I used did not evaluate the things I considered most important. Other teachers, in conversation about their work, expressed this same frustration. But, we felt unable to change the student report cards. We had accepted unconsciously the report card as the only way to evaluate students and we lacked vision about how we could change it. My research begins to build such a vision. Specifically, it will attempt to build a metaphorical vision of what student report cards are like. This is a study of the whatness of student report cards. It is a study of student report cards and the social context in which they are found.

Why is this a metaphorical study? For a number of years, I have been profoundly interested in words and the effect they have on individuals. Several times in the past I personally have experienced the impact of labels. As a teacher, I have seen the influence of labels on students, especially negative labels. My original work in the area of metaphors was as a Master's student. My first thesis was a metaphorical examination of teacher inservices in Social Studies.

When I began my doctoral study, my interest in metaphors continued. My only concern was to find a topic where I could continue my examination of the power of metaphors on our society. Dr. Ted Aoki, in a course given at this university in 1987, spoke of the Celebration of the Commonplace. He encouraged students to take the commonplace, bring it from the mundane, and center upon it as a social study. This is the kind of social study I have attempted to do.

Student report cards are so commonplace that researchers have not given them a second thought. This study is the Celebration of the Commonplace - the social world of student report cards. Students report cards as a social study are very important for a number of reasons. First, they are the center of student's educational lives. Every day of a student's life includes a concern about student report cards. Ultimately, all behavior, all attitudes, all effort, all assignments, and all learning is graded, rated, and labeled for student report cards. Thus report cards should be appraised because they are so vital to the social and cultural world of students.

Second, student report cards reflect what is meaningful in school and in education. Education has as its major mandate the socialization of our youth. Student report cards should be weighed and measured from this perspective.

Third, student report cards reflect what is meritorious in our society. By centering on student report cards, this study will highlight the logic and the ethic of our Canadian culture. Only when we accentuate some of the dominant metaphors of our culture can we comprehend it more dearly than before.

Report cards are sanctioned devices intended to summarize student performance. Because they are sanctioned by authority, they are legitimized. Because they are believed so crucial and necessary, they often arouse passion and controversy among the students, their parents, and the community at large.

How did student report cards get so important? At first glance, they are not that impressive. Some report cards consist of narratives, but others consist only of brief, terse symbols on a single sheet of paper. They hide more than they reveal. Nevertheless students from kindergarten through university and college receive them. They are used to hire one person over another, to give graduate assistance, and to reward success.

There are three basic reasons for reporting pupil progress (Giannangelo, 1975). The first is to inform the pupil; the second is to guide the student; and the last is to inform the parents of the academic growth of their children. If the youth or parents do not understand what the report cards means or if the parents do not understand the objectives of the school there may be conflict and lack of cooperation between the home and the school. It is imperative student report cards fulfil these requirements. But do they?

Chansky (1975) states that , during this century, there has been very little change in student report cards. Since 1975 there has been little or no scholarly discussion (journal articles) on student report cards. During the past twenty-five years there have been only fifteen articles published in those journals as abstracted in the Current

Index to Journals in Education. Yet, student report cards are sanctioned to such a degree that we seldom discuss them any more. It is curious that while they often arouse passion and controversy between the students, their parents, and the community at large we seldom review their value. The purpose of this study is to undertake such a critical review.

Statement of the Problem

My research rests on theoretical foundation provided by Schon (1963, 1979, 1983), an urban planner, and Turbayne (1963), Berggren (1962, 1963), Lakoff and Johnson (1980a, 1980b, 1980c, 1981, 1982), Pepper (1935, 1948, 1982), and MacCormac (1971, 1972, 1976, 1982), who are all philosophers. Their work outlines the power of metaphors to create a vision of the world and, in this instance, education. The goal of the research will be to highlight the dominant metaphors existing in those formal printed documents used for the evaluation of students. The documents will be the student report cards-as-planned, those printed forms delivered from the printers to the district, school, and then to the teachers.

The method used in this study is predicated on Turbayne's (1963) three levels of analysis:

1. the detection of the presence of the metaphor
2. the exposure of the metaphor
3. the critical awareness of the metaphor

Turbayne's levels of analysis help outline a study of student report cards. Such a study must first analyze current student report cards as text to find conceptual systems, root metaphors, educational models, and educational myths that ground them. The specific purpose of the study can, therefore, be outlined as follows:

1. analyze current provincial report cards as texts to find the conceptual system, root metaphors, and educational myths that ground them. In order to complete this analysis the following questions will guide the study:

   a. How does theoretical work about the nature of metaphor help us understand the nature of student report cards in Alberta?

   b. What metaphors exist in these student report cards? What metaphors are hidden or out of focus?

   c. What are the implications of the metaphors in student report cards?

   d. How does an analysis of the metaphorical language used in student report cards reveal the world of schooling, education, and our culture more clearly?

Outline of Methodology

The methodology for this study included the following:

1. I collected random selection of current provincial district student report cards from Alberta. From a complete list of provincial school jurisdictions, thirty-one jurisdictions were randomly selected (1 out of 5). One letter was sent requesting their jurisdiction report cards and philosophy or policy. A second letter was sent to those jurisdictions that did not respond. I received eighty-five report cards from twenty-one districts.

2. A metaphorical theoretical framework was completed. This metaphorical framework served as the theoretical grounding of the study and guided the analysis of student report cards. It developed into an indepth study of three layers of metaphors. They were (1) fundamental principles of metaphor, (2) conceptual metaphor, and (3) all language and cognition is metaphoric.

3. A research framework (review of the educational literature on report cards from educational journals and texts) for the past twenty-five years was completed.

4. The analyzation of student report cards using questions developed from the metaphorical and theoretical framework and the educational literature review of student

report cards was the next step. From an examination of the various student report cards, I attempted to answer the following questions: (a) How does theoretical work about the nature of metaphor help us understand the nature of student report cards in Alberta? (b) What metaphors exist in student report cards? (c) In what ways does an analysis of the metaphorical language used in student report cards reveal the world of schooling more clearly?

5. After the student report cards were analyzed, I examined the existing metaphors found in the report cards I collected. The following questions were addressed: (a) What are the implications of the language in student report cards? (b) What metaphors are hidden in student report cards? (c) What metaphors are "out of focus?" (d) What values are evident? (e) How is the student report card a "model" of our society? (f) What are the implication of the metaphors in student report cards? (g) How do these metaphors help us understand the society in which student report card lives? (h) How do these metaphors guide our actions in student report cards? (i) Do these metaphors force teachers and parents to understand their jobs or their children's academic lives in particular ways?

Assumptions

In completing the study, I made the following assumptions:

1. Student report cards dramatically affect the life of the student, classroom, school, and home.

2. Student report cards make short term and long term judgements on the present and future of each student.

3. Student report cards can be studied as a text. As a text, it is also a "model" that is representative of some part of North American society and particular Canadian society and can be studied hermeneutically.

4. The inherent metaphors in student report cards are the same metaphors that are also applied to the culture of education. This assumption suggests that there is an ethic to education that, although it may not be consciously held, structures the activities of the institution of education.

5. Student report cards used in Alberta's schools are representative of student report cards used throughout North America.

6. Student report cards carry a powerful meaning for those people impacted by them: teachers, students, and

parents. Because of their power, they can control and manipulate.

Limitation

This study has the following limitation:

1. The degree of participation by Alberta school jurisdictions was dicated by the percentage of student report cards sent to me upon request.

Delimitations

This study has the following delimitations:

1. The student report cards were a random selection of current Alberta student report cards.

2. Student report cards were used during the years 1987-1989.

3. This study was a metaphorical examination of student report cards. This examination is only one of a number of examinations that could take place.

4. These student report cards were from the elementary, junior high, and high school report cards levels. Report cards have a much wider use.

5. The study addressed only the document as printed, not the document in use.

Summary

This chapter has reviewed the need for a study of student report cards. It has also briefly reviewed the methodology of the study and attended to some of the traditional research concerns: delimitation, assumptions, limitation, and definitions of terms. Chapter 2, 3, and 4 will review the meaning of metaphor and suggest how powerful a metaphor is in creating a way of seeing the world.

CHAPTER 2

A METAPHORICAL EXAMINATION OF METAPHOR

Introduction: What is Metaphor?

The intention of this chapter is to show, as C. Brooks writes that, "The most fruitful modern criticism is a rediscovery and recovery of the importance of metaphor." Stephen Brown (1966:191) states, "metaphor is of the very warp and woof of language, part of its permanent texture." "All thinking is metaphorical" wrote Robert Frost. Shibles (1974:27) continues Frost's idea by stating:

> All definitions are metaphorical including the definition of metaphor because we think of one thing in terms of another, in terms of familiar models, and there is no one literal, universal model or definition which will apply to all situations and contexts at all times for all people.

"Metaphor" has been used in two fundamentally different ways. In the first and by far the most common sense, "metaphor refers to a part of language, so that a certain set of words may be said to be a metaphor" (Schon 1967). Collins English Dictionary (1979) describes metaphor as a "figure of speech in which a word or phrase is applied to an object or action that it does not literally denote in order to imply a resemblance."

Language[1] without metaphor is difficult. How better to describe one type of anger than as "hot," another as "cold," passion as "burning," a silence as "deafening," a mood as "cloudy." If metaphor was stripped from our language, we would be removing a great deal of what we "know."

In the second sense, and by far the most important to the purposes of this study, metaphor is a process of thought. In our attempts to understand our world and our experiences in our world we often use metaphor. Scheffler (1964) asserts that metaphor organizes reflection and explanation in scientific and philosophical contexts.

Metaphor often serves as ways of channelling action. Schon (1979) emphasizes the extent to which metaphor can constrain and sometimes dangerously control how we conceive the world in which we live. He suggests that metaphors generate their own solutions but they fail to present an objective characterization of the problem or the solution. Ortony (1979) writes that metaphor is important because it provides alternative or new ways of "seeing." Altiek (1960) alleges that a writer's metaphors may also tell the reader other things about that writer, as well as the attitudes that the reader is supposed to comprehend.

Writers have built on the metaphors of others to discuss metaphor. Sacks (1980:62) quotes Booth: "The quality of any culture will in part be measured both by the quality of the metaphors it induces or allows and the quality of the judges of metaphor that it educates and rewards." Max Muller (1879:352) writes, "No advance was possible in the intellectual life of man without metaphor." He also states, "Metaphor is one of the most powerful engines in the construction of human speech, and without it we can hardly imagine how any language could have progressed beyond the simplest rudiments" (1868:351).

Shibles (1974:28) states that "generally metaphor is a deviation:" 1) a deviation from usual diction; 2) from the usual contextual or situational use of words; 3) from established categories; and 4) from culture, custom, habit, the expected, familiar beliefs, what is considered proper, the practical, the logical, the self evident, the everyday, the literal, the real, the normal, or the cause and effect order of events. He also states that metaphor is perspectical and multi-meaning.

To define a term is to choose one model or metaphor, one perspective, one way of looking at the term. There is no single definition or aspect of metaphor but many. For example, metaphors are models, pictures, diagrams, maps, definitions, descriptions, hypotheses, theories, fictions, children playing pretend, role-playing, flower arrangements, micro-teaching, dreams, rituals, magic, cartoons, and games. The point is simple, but powerful. All language and cognition is metaphorical.

Hess (1966) and Verbrugge (1980) believe metaphor is basic to all growth in understanding. Metaphor is compact because "it does not require that we enumerate all the characteristics to be transferred," declares Miller (1976:175). Samuel Johnson said (Gordon, 1971) a metaphor "gives you two ideas for one." Stanford (1972:105) writes that "metaphor is a stereoscope of ideas." Metaphor is the fixers of ideas, states Rapoport (1953). Black (1963) believes metaphor organizes our view of humans. And Verbrugge (1980:96) writes, "metaphor may be described as a catalyst for a change of understanding."

Embler (1951) tells us our behavior is a function of the words we use. More often than not, our thoughts do not select the words we use; instead, words determine the thoughts we have. Language develops out of social conditions and in turn influences social behavior. Metaphor is an essential transporter of meaning in language. Langer (1958) adds to this concept when she writes that words have history. Their meanings depend on social convention, partly on their history, their past company, and on their "natural symbolism" as suggestiveness of their sound. Ortony, Reynold, and Arter (1978) define, states Barlow, Kerlin, and Pollio (1971), metaphor as an implied comparison between two things of unlike nature that have something in common.

Ortony et al (1978) declares that the power of the metaphor comes from its inability to be paraphrased. New meaning can evolve for different individuals at different times. Metaphor is essential to create thought. It is not possible for us to speak of new perceptions and insights about how objects or ideas fit together in language that have only fixed meanings. Haynes (1975) echoes these ideas when she shows how a new insight provided by a good metaphor suggests further questions. These questions tempt us to formulate hypotheses which turn out to be experimentally fertile. Good metaphor can literally lead to reasoning by analogy, which can give further insight into the extent and nature of concept interrelation, both in suggesting theoretical tests of hypotheses and in personal world views.

Metaphor has been described in a number of other ways by various theorists: absurd (MacCormac 1971, 1972a, 1972b 1976); having tension (MacCormac 1971, 1972a, 1972b, 1976; Berggren 1962; Osborn 1962); having mystery and being playful (Gordon 1961); having magic (Nemetz 1958); having fantasy (Verbrugge, 1980); being imaginative (Hester, 1966).

Nemetz (1958) asserts that metaphor consists of two parts: what is said and what is meant. The problem is always how and what a metaphor is telling us. The "magic" of metaphor consists of being able to directly transport a reader-listener to the place of insight. "Metaphor is irredeemably dual in its ground," writes Nemetz (1958:433). The Dictionary of the Apostolic Church defines metaphor as a blossom of one tree on the branch of another.

Fundamental Principles: How Metaphor Works

In attempting to understand metaphor, there is a need to reach beyond the range of definitions the theorists and writers of metaphor have provided. Each definition is a metaphor of how the author perceives metaphor. In this chapter, an attempt will be made to understand the metaphoric fundamental principles of metaphor. These fundamental principles are: sort-crossing, types of metaphor, levels of comprehension in metaphor, process of metaphor, stages in the life of metaphor, and tension in metaphor.

Each of these principles are metaphors attempting to explain how metaphor works. No one fundamental principle is complete. They overlap and contradict each other. But each provides a glimpse of how theorists view and understand metaphor. Other theorists will provide different conceptions later. Some of the present perceptions will be disregarded and others will remain.

Metaphorical Examination of Metaphor

Sort-crossing

Burke, according to Turbayne (1970), says a metaphor offers a "perspective." Metaphor is a device for seeing something in terms of something else. A metaphor can change our attitude about facts and change our perspective.

Considered from the point of view of one character, a metaphor tells something about another character. To consider A from the point of view of B is to use B as a microscope with which to view A more closely and differently. Turbayne in The Myth of Metaphor (1970) declares that to become aware of the presence of metaphor or to use a metaphor involves the awareness that there is sort-crossing. That is, there is a re-presenting of the facts of one sort in the idioms appropriate to another. Sort-crossing involves the pretense that the two different senses are one.

For example, in the metaphor "the body is a finely tuned machine" there is a pretense that the body shares some of the properties of machines but not enough of them be to classified as an actual machine. Also, there is a pretense that the two different things or sorts (body and machine) share a similar name and similar qualities (sort-crossing). We are aware of the duality of sense of "machine" but we make believe that it has only one sense. There is no difference in kind, only in degree between body-machine. It is as if the phrase "the body is a machine," which we know to be absurd, were meaningful and true. The metaphor not only pretends that something is the case when it is not, but it asks the audience to pretend as well. Actually, metaphor make one further demand. They intend that the audience believe, not just pretend, that the body is a machine. Turbayne has drawn to our attention two features. These features are 1) sort-crossing or the fusion of different sorts and 2) the pretense or as if feature.

An effective metaphor, writes Turbayne (1970), acts like a screen through which we look at the world. It filters the facts, suppressing some and emphasizing others. It "brings forward aspects that might not be seen at all through another medium (Turbayne 1970:21)." These aspects are potentially powerful because they can cause a shift of attitudes towards the object being viewed. A "good" metaphor, therefore, produces "shifts of attitudes." A good metaphor lends itself better to modeling than a "poor" metaphor.

Haynes (1975) believes the new insights provided by good metaphor suggests further questions, tempting us to be experimentally fertile. Good metaphor can literally lead to reasoning by analogy, which can give further insight into the extent and nature of concept interrelations, both in suggesting theoretical tests of hypothesis and in personal world views.

For example, to liken the human mind to a computer is a better metaphor than to compare it with a book. The metaphor is "good" because it allows us to see how one would go about constructing a promising model of mental activities on the basis of the suggested similarities between a human mind and a computer. This particular metaphor's background is from the metaphor "the world is a machine " which, when extended, becomes "man is a machine" metaphor. "The world is a machine" metaphor is a "good" metaphor because it suggested many other metaphors and models in many other disciplines, for example, education, medicine, psychology, and economics. "The mind is a computer" metaphor has stimulated models and theories in communications, education, and psychology. A good metaphor is one which can be extended into a good model.

A change in attitudes can even cause a change in fact. When attitudes are changed and this change becomes acceptable to many, old descriptions are neglected and facts are changed. The human characteristics that Aesop pretended were owned by animals have become literally parts of these animals' characteristics: foxes have become cunning and lambs have become gentle, horses have sense, and mules are stubborn. And now, as Gordon (1971) suggests, these animal traits have returned to be human qualities. For example, people have horse sense, are meek as lambs, and are stubborn as mules. They go on wild goose chases, are old goats, and mother hens.

The fable, the parable, the allegory, the analogy, and the model are extended or sustained metaphors. Langer (1958) suggests that slang is entirely far-fetched metaphor. Slang terms are not what they appear to be; they are all cases of representing the facts that belong to one sort as if they belonged to another. They are stories we believe to be true.

Types of Metaphor

MacCormac (1971, 1972a, 1972b, 1976) describes metaphor using different terms. His description is based on an analogy described by Philip Wheelwright (1962). The two theorists divide metaphors into two types: epiphor and diaphor.

Wheelwright's (1962:72) definition of epiphor is "starts by assuming a usual meaning for a word; it then applies this word to something else on the basis of, and in order to, indicate, a comparison with what is familiar." The semantic meaning is "over on to" (Epi) and "movement" (phora). Epiphor expresses a similarity between relatively well known and relatively unknown subjects.

An epiphor metaphor, according to MacCormac (1971, 1972a, 1972b, 1976) achieves its meaning by expressing experience that is parallel to the hearer-listener's experience. Upon confronting an epiphor metaphor, the hearer-listener will be dimly aware of something in the expression that is recognizable. For example, one common metaphor is that "time flies." At first there must have been a feeling of tension and a sense of absurdity when the phrase was interpreted literally. But the phrase suggested a certain way of perceiving "time." It seemed plausible that "time" could pass rapidly like a bird flying. This phrase seemed applicable to the listener-readers's experience, as it does ours today. Because we do "see" time like this, it expresses our experience.

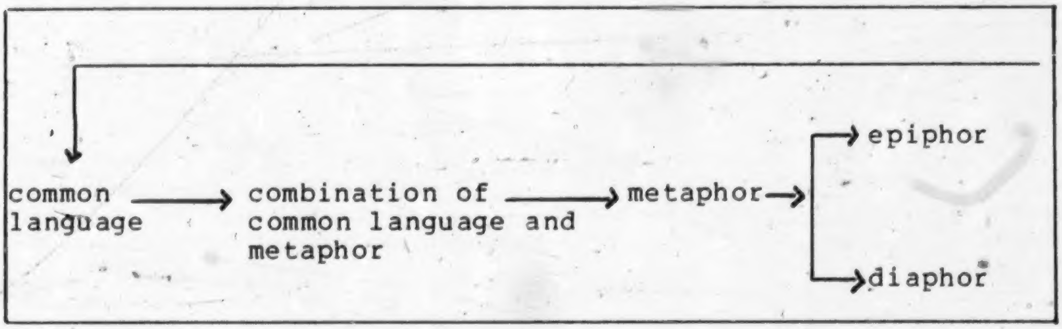
Other examples of epiphor metaphor are: "to see the point of the story," "a heated conversation," and "no time." Many epiphor metaphors pass into ordinary language when the tension and absurdity are relieved and the experience the metaphor suggests is accepted. Examples include "survival of the fittest," "light travels," and "high tension" (MacCormac, 1971, 1972a, 1972b, 1976).

Wheelwright's (1962:78) definition of diaphor is exemplified by "'movement' (phora) 'through' (dia) certain particulars of experience (actual or imagined) in a fresh way, producing new meaning by juxtaposition alone." In other words, phrases and sentences that may or may not be metaphorical in their own right can create a metaphorical image when placed together in a communication.

MacCormac (1971, 1972a, 1972b, 1976) also writes about diaphor. The phrase "the world is mathematical" is not an expression of our experience. It suggests an experience. This metaphor is labeled diaphor: one that suggests possibilities for experiences rather than expressing experiences we have had but of which we are not explicitly aware. Poets constantly suggest unusual interpretations or ways of looking at the world. Many of their metaphors remain suggestions because they are only suggestions. For example, poems may suggest that "Spring is a female goddess who brings life and love to the land" or the "sun's a wizard." All root metaphors are diaphors.

Still, some metaphors begin as diaphors then become epiphors. Still later, they become ordinary language or "dead" metaphors as evidence is found to collaborate the kinds of experience they suggest. For example, the metaphor "the world is atomic" began as diaphoric; but, in the nineteenth and twentieth centuries evidence confirmed this notion and it became epiphoric. Now it is language we can live and experience. Figure II-1 diagrams this process as follows.

Figure II-1 THE LIFE OF A METAPHOR



Schools are factories. Here the words are commonplace; however, their combination produces an absurdity when they are read literally. Grammatically, it is a category mistake. In the beginning, this metaphor did not express some experience or even the possibility of new experience; it was a diaphoric metaphor. I am suggesting that over a period of time the suggestion of possibility has become the expressing of experience; it has become an epiphoric metaphor.

There are neither pure epiphors nor pure diaphors. A pure epiphor could not be a metaphor for it would not produce a tension or absurdity in the reader-listener when read-heard literally. For example, the man is human does not either produce tension or absurdity. All legitimate metaphors have both epiphoric and diaphor qualities; they must have some aspects which we can recognize as similar to our experience and they must also suggest new experiences (MacCormac 1971, 1972a, 1972b, 1976). For example, in 1981 Time magazine suggested [Vice-President] Bush was a "whimp." We had experienced the person Mr. Bush but had never viewed him from this metaphor. In 1989 President-elect Bush's image makers had to work overtime trying to change this previous image with pictures of him fishing, hunting, or engaged in other macho activities.

Metaphors are used to express or suggest experience (MacCormac 1971, 1972a, 1972b, 1976). The purpose may be to convey new knowledge to us, to suggest new possible perceptions, or to affect our emotions. If the metaphor is more suggestive than descriptive, it is labeled epiphoric. But if it is more descriptive than suggestive, then it is diaphoric.

Why does MacCormac (1971, 1972a, 1972b, 1976) label some metaphors as epiphors and others diaphors? He suggests that it is to avoid the misinterpretations that result from failing to distinguish between metaphor that is more expressive than suggestive (epiphors) and metaphor that is more suggestive than expressive (diaphors). Although all metaphor both expresses and suggestes, some do more expressing than suggesting, while others suggest more than they express. This labeling becomes important to MacCormac in the discussion of his theories of the 'life of the metaphor,' myths, the process of metaphor, uses and abuses of metaphor.

Levels of Comprehension of Metaphor

There are four levels of understanding of metaphor. They are substitution, comparison, interaction, and transformation. The subsitution level is the most elementary level and best understood. Its form is "A is B," writes Honeck (1980). Examples of this form are: "John is a bulldozer," "the class is a zoo," "the sun is a moveable target," and "the mind is a wax tablet." In each example there is nothing more intended but an indirect way of presenting some intended literal meaning "A is C."

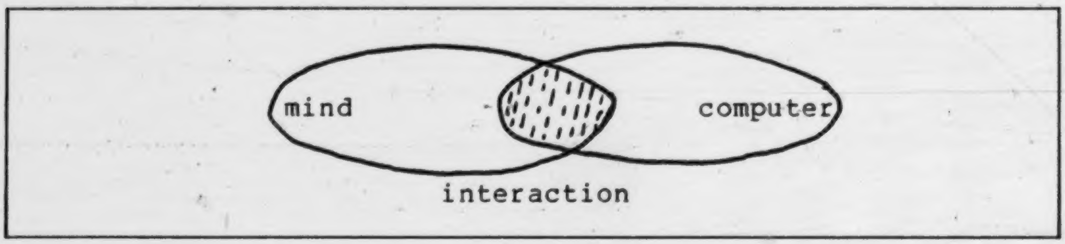
The second level is comparison where the form is "A is B." This form is a means of indirection by which we get at the speaker-writer's intended literal meaning " A is like B." According to this level, the meaning of the metaphor is a literal set of relevant similarities picked out by the context of the utterance. For example, "the class is like a zoo," "the sun is like a moveable target," and "the mind is like a wax tablet." Haynes (1975) suggests that the comparative level transfers the characteristics of Y to X in order to say something about X. This level, according to Honeck (1980), is basically a substitution level and consists of rendering meaning through paraphrase. These levels can be traced to Aristotle. Black (1963) claims that both substitution and comparison metaphors can be replaced by literal translation. Substitution and comparison are not especially important to this study.

Interaction is the third level. Honeck (1980) asserts that in the metaphor "A is B" form, the system of associated attributes attaching to A (tenor) interacts with that which attaches to B (vehicle) to produce emergent metaphorical meaning. The interaction of these two systems of implications results in the selection of appropriate attributes of the tenor (A) that are then applied, in the same or modified sense, to the vehicle (B). The interaction involved a mutual influence of one system of attributes upon another. There is a notion of "seeing as" or perspectival seeing. Hester (1966:207) labels this "metaphorical seeing." Metaphorical seeing is "a seeing as between the metaphorical subject and the metaphorical predicate, either one or both of which must be image-exciting."

On the interactive level, writes Haynes (1975:273), placing known characteristics of D against those of E may provide "new" insights, either about E or about a new F. It becomes an "irreducible synthesis by juxtaposition which it is difficult to reduce to simile or literal language." An interactive metaphor, writes Ortony (1975), changes concepts in some mysterious way.

This change is not allowed in the comparative level, Black (1963) declares. The metaphor emphasizes, suppresses, and organizes features of the tenor by implying statements about it that normally apply to the vehicle. These statements involve shifts in meaning of words belonging to the same family or system as the metaphorical expression. Some of these shifts, though not all, may be metaphorical transfers. Black further claims that interaction metaphors are not expendable because they require readers-listeners to make inferences and to draw implications rather than merely to react. Figure II-2 shows the interaction of the tenor and the vehicle of a metaphor as follows:

Figure II-2 INTERACTION OF METAPHOR



It does not matter, writes Sapir (1977), what is tenor or what is vehicle. What matters is that the interacting of the two terms and their respective topics with a resulting "new entity." Kenneth Burke (1952:502-503) writes, "It [metaphor] brings out the thisness of a that, or the thatness of a this." He continues, "to consider A from the point of view of B is of course is to use B as a perspective upon A." Hess (1966) in her discussion of interaction states that a metaphor causes us to "see" the primary system differently and causes the meaning of terms originally literal in the primary system to shift toward the metaphor.

MacCormac (1976) writes that the tenor and vehicle must be understood in context. Ortony (1978) contends that not all metaphors can be understood and diagnosed in the surface structure of an utterance, but must be understood in the context where they are read or spoken. For example, many stories in the form of fables, parables, allegories, analogies must be understood as a whole in order to understand the metaphor. This also applies to many imaginative hypotheses, ideas, and concepts. Ortony suggests that one way to achieve an understanding of metaphor is to recognize metaphor is contextually anomalous rather than semantically anomalous. This level of understanding is crucial to this study.

The last level is transformation. According to Verbrugge (1980), to comprehend a metaphor is to perceive familiar structures or transformations in an unusual context. We are invited to transform the tenor into the vehicle. The transformation of the tenor is partial because the tenor is not re-identified completely as the vehicle. Also, the transformation is imaginal, a type of virtual experience. This transformation is psychological, because it is a psychological relation or process rather than a property of relationships holding over linguistic forms. Last, the transformation is fanciful. The experience is unconventional and unusual.

Soon metaphors become unconsciously accepted and we don't consider them as at all strange. Metaphor becomes life. This level of understanding of metaphor is very important to this study and will be dealt with in greater detail in later chapters both conceptually and through the application of student report cards.

The process of metaphor

From the point of the reading or listening of the metaphor until the reader-listener responds to the metaphor, there are three major steps in its interpretation of the metaphor, writes Osborn and Ehninger (1962). They are error puzzlement, recoil, and resolution. Below is Figure II-3 illustrating this process which will be discussed in more detail.

Figure II-3 THE PROCESS OF METAPHOR

Metaphor used as an example: Skyscrapers are giraffes

A. Error (not to be taken literally)

B. Puzzlement-recoil (agitation, uncertainty, puzzlement, recoil)

C Resolution
  1. logically prior elements
    a. subject (skyscraper)
    b. item for association (giraffe)
  2. dual interpretants
    a. tenor (skyscraper)
    b. vehicle (giraffe)
  3. qualifiers
    a. contextual (situational or linguistic context)
    b. communal (common experiences, traditions or folk ways of a society)
    c. archetypal (common experiences common to all people)
    d. private (personal or subjective association to the reader-listener)

The first is error. Take for example, "skyscrapers are giraffes." In large cities in North America, visitors look all the way to see the top of a tall, slim, majestic skyscraper. Giraffes eat the leaves from the branches of tall trees. They are tall, huge and tower over basically everything in their environment. Every animal in comparison to a giraffe seems miniature in size. The same goes for skyscrapers, they are tall and bigger than most other buildings in a city.

Initially a literal meaning is assigned to the words by the reader-listener. Often this literal meaning is the one intended, except in the case of a metaphor. This first interpretation is apt to be erroneous.

Once the metaphoric expression is recognized as erroneous, the reader-listener is aware the word/phrase (skyscrapers are giraffes) is not being employed in its literal sense. The error stage terminates. This recognition may result from the realization that this term is logically or emotionally inconsistent with its immediate perceptual or verbal context. After this recognition, the interpretation enters the second, or puzzlement-recoil stage (Osborn and Ehninger, 1962).

In the puzzlement-recoil stage, the reader-listener experiences agitation, uncertainty, puzzlement, and may even recoil from it. This recoiling motivates the reader-listener to solve the puzzle created by the uncustomary use of the phrase, "skyscrapers are giraffes." The metaphor propels the reader-listener to seek a proper understanding of the phrase and when it does the resolution stage is entered (Osborn and Ehninger 1962).

In the resolution stage, the most important part of the work of metaphoric response occurs. This work involves three constitutive factors: 1) logically prior elements, (2) dual interpretants, and 3) qualifiers (Osborn and Ehninger, 1962). Two elements of "logically prior elements are subject and item for association. In the example metaphor, "skyscrapers are giraffes," the subject is skyscrapers. Skyscrapers is the source of the first interpretant which enters into metaphoric interaction. It is the situation, person, or object "the metaphor applies to." The stimulus embedded in the metaphor may be implicit or explicit.

The second interpretant is item for association. It is the related idea or object with which the subject, skyscraper, is associated. "Giraffes" is the item for association. Giraffes does the "describing" or "symbolizing," that illustrates or "illuminates" the subject, as to bring out those qualities which makers of the metaphor had in mind when writing/speaking the metaphor.

The second factor, continues Osborn and Ehninger (1962), is the dual interpretants which includes tenor and vehicle. The tenor is the subject (skyscrapers) of the metaphor. The vehicle, giraffes, is the "thought" of the subject (tenor) and the "thought" of the item for association (vehicle) which in their meaningful action together determine psychologically the appearance and sense of the metaphor, "skyscrapers are giraffes."

Qualifiers is the third factor. It also has four classes: contextual, communal, archetypal, and private. Contextual qualifiers result from the linguistic or situational context in which a metaphor occurs. For example in the metaphor "He was a lion in combat" the contextual qualifier is "in combat." It explains or "qualifies" the stimulus "lion." This stimulus directs the attention of the reader-listener to those particular properties of the lion that are relevant to the intended meaning of the metaphor (Osborn and Ehninger, 1962).

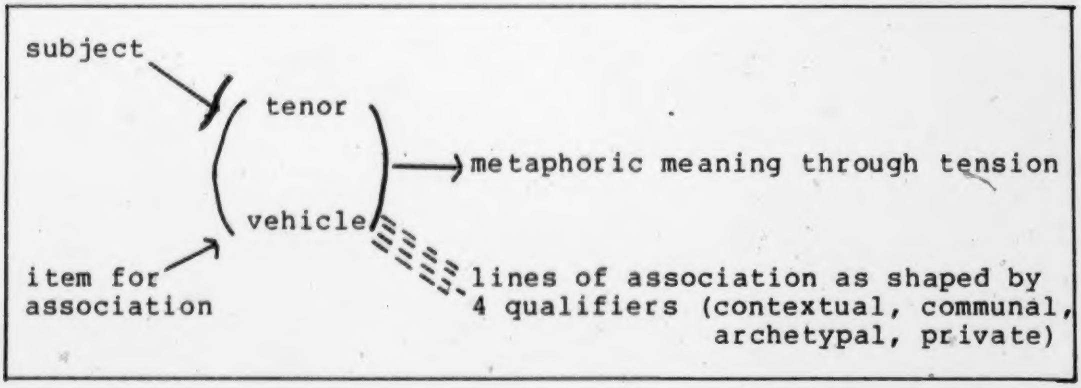
A second qualifier is communal (Osborn and Ehninger, 1962). This qualifier arises from common experiences, traditions, or folkways of the society to which the metaphor is directed. A particular society or group within society respond in a pre-determined way either because of frequent use. The stimulus has become a linguistic convention. Or, because an approved interpretation has been stamped upon them by authority.

Archetypal is the third qualifier. This qualifier depends upon experiences common to people of many races and ages. Some examples of archetypal qualifiers are: above/below, light/darkness, war/peace, and land/sea. The final interpretation of these qualifiers are individual and based on experiences. A number of these qualifiers cease to produce responses within the society and often cease to be "metaphoric." They become either "dead metaphors" or "stale metaphors," writes Osborn and Ehninger (1962). For example, "fate," "hero, "ego," "the mind is closed," and "lines of force" are dead metaphors.

The last qualifier is the private qualifier, writes Osborn and Ehninger (1962). This qualifier is based on the personal or subjective associations of the reader-listener as in the example "skyscrapers are giraffes." These metaphors are labeled "new" or "radical" metaphors. Private qualifiers give a unique meaning to a metaphor. Even when contextual, communal, and archetypal qualifiers combine to produce a high degree of commonality individuals can impress of their own interpretation upon the metaphor.

The following figure II-4 has been adapted from Osborn and Ehninger (1962:230). This figure attempts to demonstrate the structure relationships obtained among the parts and how they interact to produce "metaphoric meaning" in the third step resolution.

Figure II-4 RESOLUTION


subject
tenor
metaphoric meaning through tension
vehicle
item for association
lines of association as shaped by 4 qualifiers (contextual, communal, archetypal, private)

The interpretant of the subject (tenor) and the interpretant of the item for association (vehicle) are related by the receiver, along the lines of association determined by the qualifiers. As a result of this interaction, the reader-listener arrives at "metaphoric meaning," which in effect is an attitude and/or assertion concerning the subject. This model is an attempt to provide a guide to what is encountered in this last step, resolution. These are the essential elements, their origins, the forces working upon them, and the structure relationship obtaining among them.

Resolution may occur instantly and almost automatically, or it may involve much time and effort by the reader-listener. It begins with an "insight" on the part of the receiver that the word or phrase is not to be interpreted literally. The receiver proceeds to apply relevant contextual, communal, archetypal, and private qualifiers so as to construct lines of association between the tenor and vehicle. These lines of association draw the interpretants into an intellectually and/or emotionally satisfying relationship (Osborn and Ehninger 1962).

In the metaphor "skyscrapers are giraffes," people must look skyward to see the top of a skyscraper. Skyscrapers are also bigger than most other buildings in a city. As a result of this explanation, the tension caused by this metaphor is reduced or eliminated and the reader-listener can complete the third step, resolution. The tension is indicated in the model by the lines of association as shaped by qualifiers.

Stages in the life of metaphor

Turbayne (1970) describes a three stage life cycle of metaphor. At first, a word's use is simply inappropriate because it gives one thing a name that belongs to something else. It sort-crosses. The first response of humans is to deny the metaphor and affirm the "literal truth": "metal fatigue" and the "cruel sea" (only humans can be tired and be cruel, while metals can wear out and people may drown in a rough sea.)

But because such affirmation and denial produce the required duality of meaning, the effective metaphor enters the second stage of its life cycle. The once inappropriate name becomes a metaphor. The metaphor is accepted by acquiescing to the make-believe. By making believe that sounds are vibrations, mind is behavior, seas are cruel, teachers burnout, or that metals fatigue, we use metaphor purposely to illuminate obscure or previously hidden facts. At this stage, the metaphor fools hardly anyone. Stage two may last a very long time if the metaphor is accepted as a good description. Within this long period, the original metaphor may develop in various ways only one of which is a case of taking the metaphor literally (Turbayne: 1970).

In the third stage in the life of metaphor, continues Turbayne (1970), we no longer make believe that the metaphor only describes. The metaphor becomes the thing. Sounds are truly vibrations. The school is an industry. The sea is cruel. Metal fatigue does exist. Light does travel. What were models are now taken for the things modelled. That is, special sets of implications had been invented: the school, the sea, and metal. Conclusions about one were reducible to the premises about the others. Sort-crossing became sort-trespassing. The long continued association of two ideas results in our confusing them. In the case of the metaphor, the confusion is aided by the following factors:

1. the two ideas already share the same name, a factor of great power in producing the belief in identity.

2. we are not always told that the two ideas are really different.

3. even when we are told the difference, we export properties from one ideal to the other (sort-crossing).

4. the line between make-believe and belief is thin.

MacCormac's (1976) theory, as does Turbayne's, suggests that metaphors change their status. Metaphor may be formed in one of three ways. These ways include: 1) putting two words together, 2) taking an old word and giving it a new meaning, and 3) creating a new word possessed of some properties which are familiar to us. At first, the new metaphor seems strange because it has an unusual usage. It shocks us. We must stop and consider its possible meaning.

If it is more expressive of human experience than suggestive, and if we can liken it to our own experience understand the meaning that it conveys, then it is an epiphor metaphor. If it is more suggestive, and there is less correspondence to our own experience, then it is a diaphor metaphor. After a while, it may occur to us that what seemed for so long only imaginative and suggestive really does express how we feel or think. We may forget our initial confusion. At this point a diaphor metaphor can become an epiphor metaphor. Not all metaphor passes through this route. Some epiphor metaphor remain epiphoric and some diaphor metaphor may become epiphors. Many epiphor metaphors, the dead ones, become ordinary language.

It is significant, writes MacCormac (1976), that metaphor need not be static as a linguistic device. A particular metaphor may well fade into ordinary language or may shift from being suggestive to being expressive. Transition in status takes place as the reader-hearer interprets the meaning of the metaphor and confirms or does not confirm it in personal experience. A term that does traverse the whole path may begin as a diaphor metaphor, become an epiphor metaphor, and then become ordinary language, for instance, "man is a machine." When epiphor metaphor returns to ordinary language they become symbols that represent objects, states of affairs, or events. Ordinary language has this symbolic function of representation.

Some symbolic forms begin as metaphor and are fixed in meaning. They do not become a part of ordinary daily usages, for example, "water is birth and life." There are also borderline metaphors which are difficult to label epiphoric or diaphoric, for example, "The brain is a computer."

Brown (1966), another theorist, describes the life of metaphor as having two stages: the living and fossil. When the users of metaphor are no longer conscious that it is not only a label or token standing for a given object of sense-perception, the metaphor came to be a mere label or token standing for some other object of quite a different nature. At this stage in the life of the metaphor it is absorbed completely into the language and is no longer felt as a metaphor, for example, leaves of a book, or table leaves. The process, accordingly to Brown (1966:41), by which the living metaphor becoming fossilized or poetical can be seen in three steps:

> 1. A- The word is a mere token for a particular idea.
>
> 2. AB- It is metaphorically applied to a second idea carrying with it the first as an associated image which is not entirely absent from the consciousness either of the user or of the hearer of the expression.
>
> 3. B- By the frequent and indiscriminate use of the word in this second meaning the associated image becomes dimmer and more blurred, until in the end it disappears, and now the word is a mere token the second idea, e.g., a "sheet" of paper without thinking of bedclothes.

While words are passing through the transitional stage, continues Brown (1966), they are living full of vitality and poetry because they contain a suggestive, imaginative element. When the consciousness of the metaphor has faded, they are still metaphors, but now they are fossilized. Their poetical vitality is gone.

Osborn and Ehninger (1962:230) do not discuss metaphor as having stages, but label metaphor as fresh or "radical" metaphor, old or established metaphor, and "dead" and "stale" metaphor. Labeling can be viewed as stages in the life of metaphor. This theory will be discussed in detail in the next section.

All three theorists, Turbayne, MacCormac, and Brown, describe the life of the metaphor in similar ways. However, they use different terms in their descriptions. Their concepts are basically the same, but they describe them differently. Each sees metaphor as a process of thought and not a stagnant grammatical figure of speech.

Osborn and Ehninger (1962) divide metaphor into three categories: fresh or "radical," old or established, and dead. MacCormac (1976) states that some metaphor are more suggestive than others. The most speculative and hypothetical never become reduced to ordinary discourse, but remain primarily suggestive and hypothetical. Osborn and Ehninger (1962) declare that some metaphors are more powerful or weaker than others based on the emotional and intellectual experiences that these metaphors produce in the hearer-listener. Potent metaphor causes the reader-listener to experience surprise, shock, and absurdity when first confronting the metaphor.

Tension Theory

The tension theory metaphor is an extension of the "weaver's metaphor." Plato was the first theorist who discussed the "fabric of discourse" metaphor or the "woven ideas" metaphor. Stephen Brown (1966:191) states that "metaphor is of the very warp and woof of language, part of its permanent texture." Langer (1957:280) writes, "This has given us that continuity of actual experience which makes it the study warp of reality, through which we draw the connecting and transforming of woof-threads of conception." She describes language as an "elaborate tapestry one often cannot tell how the fibers are involved with each other." Later she writes, "It is the woof-thread that creates the pattern of a fabric, howbeit the warp may be used here and there to vary it, too" (p.281).

How are the "weavers" metaphor, "warp," "woof," and "tension" interwoven? The Collins English Dictionary defines woof as the crosswise yarns that fill the warp yarns in weaving; warp as the yarns arranged lengthways on a loom, forming the threads through which the woof yarns are woven; and tension as the degree of being stretched or the degree of tightness or looseness or high tension and low tension.

A number of theorists (MacCormac, 1971, 1972a, 1972b, 1976; Berggren, 1962, 1963; Osborn and Ehninger, 196[illegible]; Beardsley, 1958; and Perrine, 1971) say that metaphor has a tension that needs to be resolved through the process of interpretation or assimilation.

When MacCormac (1976:74) discusses tension he writes, "Tension is the emotional shock produced in the hearer [-listener] by an intentional misuse of language." If the metaphor is taken literally it produces absurdity, which he states is the essence of the tension theory. When we first hear or see a metaphor we are not comfortable seeing the ordinary language used in this fashion. In a sense it surprises us and causes us to pause and consider what is meant by this strange placing together of words. When metaphors are new they may evoke some emotional response from us, for example "a computer having intelligence" or "metaphor is a tulip bulb." This emotional response can be on sliding scale from a very strong to a very weak response.

Osborn and Ehninger (1962) extends the theory of tension by modeling tension for three types of metaphor: the "radical" metaphor, the old or established metaphor, and the "dead" metaphor. The tension between the tenor and vehicle depends on the degree of surprise or shock that a reader-listener experiences when first confronting the metaphor. The more unusual or unexpected this relation the more strain placed upon the threads necessary to hold the metaphor together.

A fresh or "radical" metaphor, according to Osborn and Ehninger (1962), is "stimuli which assert unusual or unexpected relationships." In a new or radical metaphor a state of high tension exists. When this tension is suddenly relieved by insight into the intended meaning of the metaphor, the meaning can be very deep. It is possible for the threads to be stretched so far that they snap and the metaphor falls apart as meaningless and thus dies. In old or established metaphor the lines of tension are short and slack. They are nonexistent in "dead" metaphor. Below are diagrams of the three types of metaphor, beginning with "radical" metaphor.

A "stale" or threadbare metaphor is one that has not completely assimilated in the community's stock of literal or designative signs, for example, he is the father of his country. The dead or fossil metaphor is one who stimuli does not produce any response, for example, "the leg of the table," "the arm of the chair," "eye of the needle," and "head of a pin."

Accordingly to Berggren, (1962:244) there are two related dimensions to the tension of the tension theory:

> 1. [there] is a logical or empirical absurdity [that] stands in apparent conflict with a possible truth.
>
> 2. this possible truth may itself depend upon a creative interaction between diverse perspectives which cannot be literalized or disentangled without destroying the kind of insight, truth, or reality which the metaphor provides.

For example, in the metaphor "the class was a zoo today," it is absurd to think a class of students could be a zoo. On one level the metaphor is simply a comparison or

Figure II-5 FRESH or "RADICAL" METAPHOR

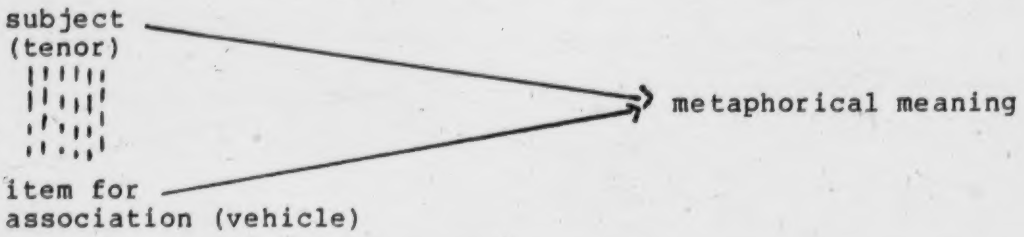

subject
(tenor)
metaphorical meaning
item for
association (vehicle)

Figure II-6 OLD or ESTABLISHED METAPHOR

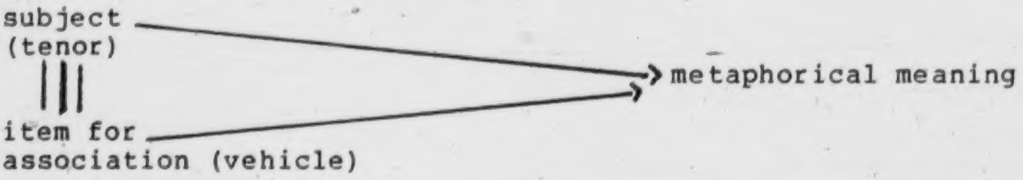
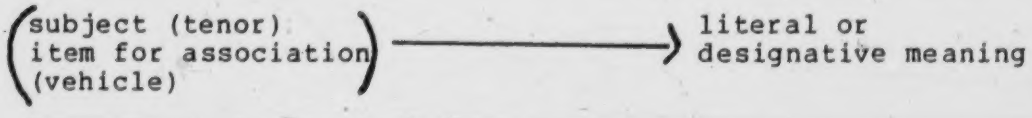

subject
(tenor)
metaphorical meaning
item for
association (vehicle)

Figure II-7 DEAD or FOSSIL METAPHOR


subject (tenor)
item for association
(vehicle)
literal or
designative meaning

substitution. But, on another level, it is possible the teacher acted like a zoo keeper trying to keep the students apart and quiet. The students could have acted like caged animals. The interaction between the tenor, (the class), and the vehicle, (a zoo), could not be disentangled without destroying the intent of the speaker about how the teacher acted toward the class.

There are five elements in the basic structure of the tension theory, accordingly to Berggren (1962): (1) there are two referents in any metaphor: tenor and vehicle; (2) a literal interpretation would produce absurdity; (3) metaphor has an "as if" quality; (4) metaphor can suggest new meaning; and (5) metaphor can be transformed into myths.

Continuing MacCormac's (1976) tension theory, the "as if" quality of many metaphors disappears after a time. What may start as a suggestive joining of two ideas filled with tension ends up a common part of our ordinary language. For example, there is little tension left in these metaphors: time flies, time stands still, no time, or not enough time. This misuse of language becomes the proper use or common use.

There is no set length of time for the tension in metaphor to disappear. Often we are unaware of it until an examination of a dictionary is made. For example, in the 1755 Samuel Johnson dictionary, the word "chaff" meant "refuse left after the process of threshing grain" and "any worthless thing." By 1966 the definition also included "thin metallic strips that are dropped from an aircraft to create confusing signals on radarscopes." The word had changed from a "useless" thing to one of "worthwhile." Now "worthless" material is considered as if it is "worthwhile."

Tension in metaphor can be produced either by odd combinations of words or by actual contradictions in usage. An example of a metaphor of an odd combination is "children in school are clay." A metaphor of contradiction is one where the tenor and the vehicle are logically opposed to one another. The word "particle" was once referred to as solid and irreducible. How it is used to indicate entities that are divisible. Another example is the word "chaff" as discussed above or "schools are factories."

Whether metaphor produces an absurdity either by oddness or by outright contradiction, they all possess two referents and an ambiguity of reading. Not all ambiguous forms of language are metaphor. One difference between everyday talk and metaphorical dialogue is the emotional response of the hearer-listener. Thus, continues MacCormac (1976), a metaphor offers not only an unusual grammatical usage, it also suggests experiences beyond the ordinary literal sense of everyday life. Some metaphor is more suggestive than others; also, there is metaphor that is more speculative and hypothetical and which is never reduced to ordinary conversation.

To summarize (MacCormac 1976), the difference between ordinary language rests not only upon the tension produced by metaphor and absent from common discourse, it also depends on the speculative and hypothetical nature of metaphor.

Conclusion

In my attempt to understand metaphor, it became apparent that there were four levels of understanding to a metaphor. To me, a tulip bulb illustrates these levels. Since this metaphorical "grew in my brain," I choose to name my perception of metaphor The Chapman Tulip Metaphor.

A tulip bulb is formed in layers called "bulb scales." These bulb scales store food for the plant to live on while underground during the winter. The more layers of these scales, the bigger the bulb and the better the flower. Each bulb scale is separate from another but attached to all others at the bottom of the bulb in the "basal plate." From the basal plate, tiny "bulblets" form which eventually grow into full-sized bulbs known as "offsets."

As each layer is peeled down another layer appears until the center is apparent. The center is a solid mass with no other layers. Tulips are planted in the fall where they rest in the frozen ground until the first signs of spring. They spring forth as one of the first signs of spring in unlimited colors. Horticulturists and tulip lovers are constantly developing new variations of the tulip. The flower lasts but a short time and dies. But underground the bulb has produced another bulb, so that now there are potentially two flowers where once there was one. The bulbs remains dormant or inactive until the following spring where they regenerate into new blossom. The whole process begins again.

Metaphors work the same ways. They spring forth, blossom, sometimes die or become part of our language. Often they reappear as extended meaning or new meaning later. They lie inactive for short or long periods of time only to regenerate into a new state of meaning. Metaphors offer us new meanings to things we have seen before. They constantly grow and change, helping humans experience life with more color and variety.

About the Tulip

There are four levels of understanding of metaphor. The first level I have chosen to name is Figurative Language. This level is understood by most of us as it relates to poetry. It is this understanding that we have from our language arts or English classes of school.

The second level I have labelled Fundamental Principles of Metaphor. Chapter Two is a discussion of this layer of understanding. Chapter Three is a discussion of layer three, Conceptual Metaphor. The last layer of metaphor is the center of the bulb. It has an underlying understanding of metaphoric understanding, All Our Language and Cognition is Metaphoric. It is important to remember that all layers of metaphoric understanding are united as a single bulb. Each layer cannot be understood alone, it must be understood in relation to the other layers.

The following three diagrams from my metaphor illustrate the understanding of the first two layers of metaphor as discussed in this chapter.

Figure II-8 THE CHAPMAN TULIP BULB METAPHOR

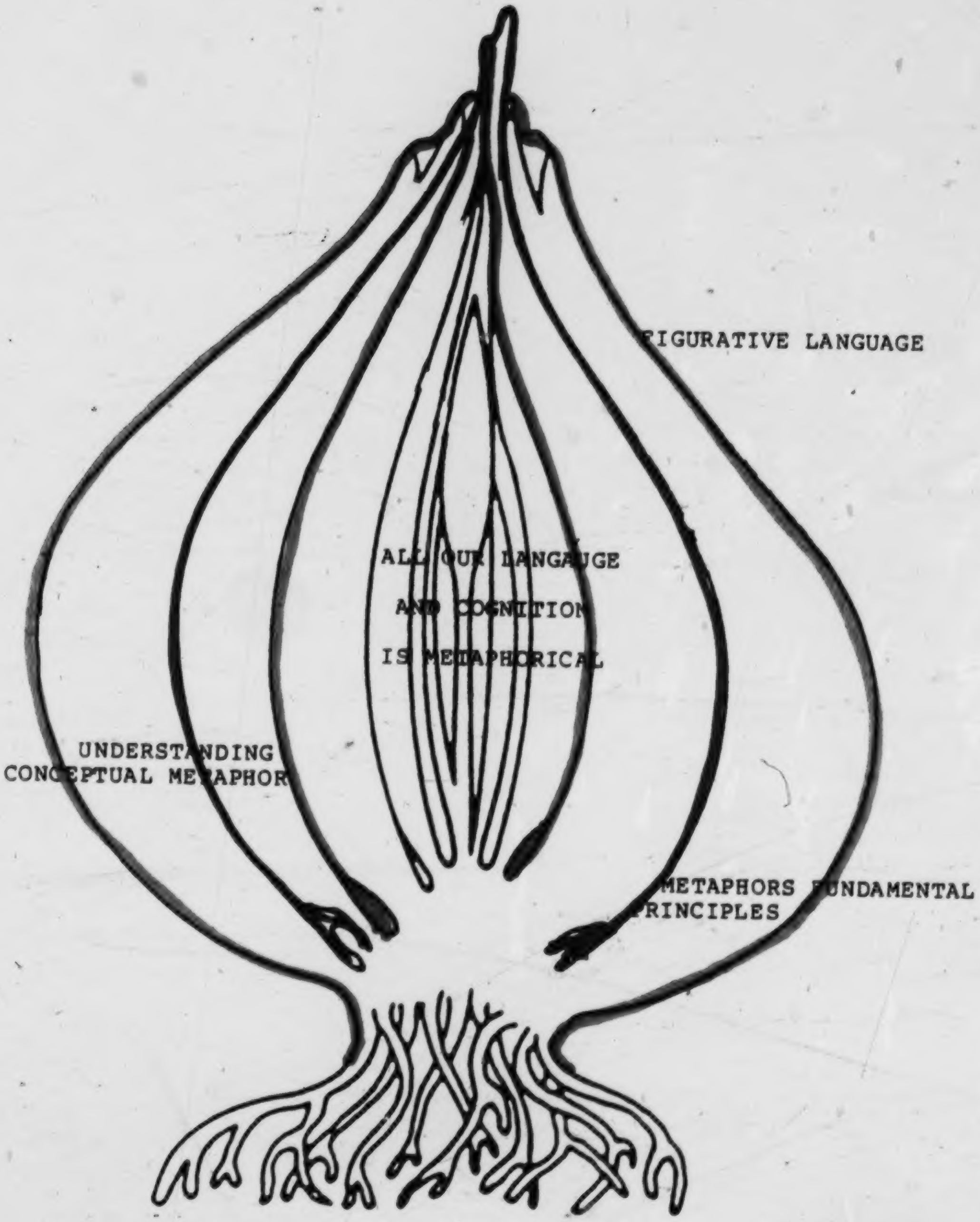
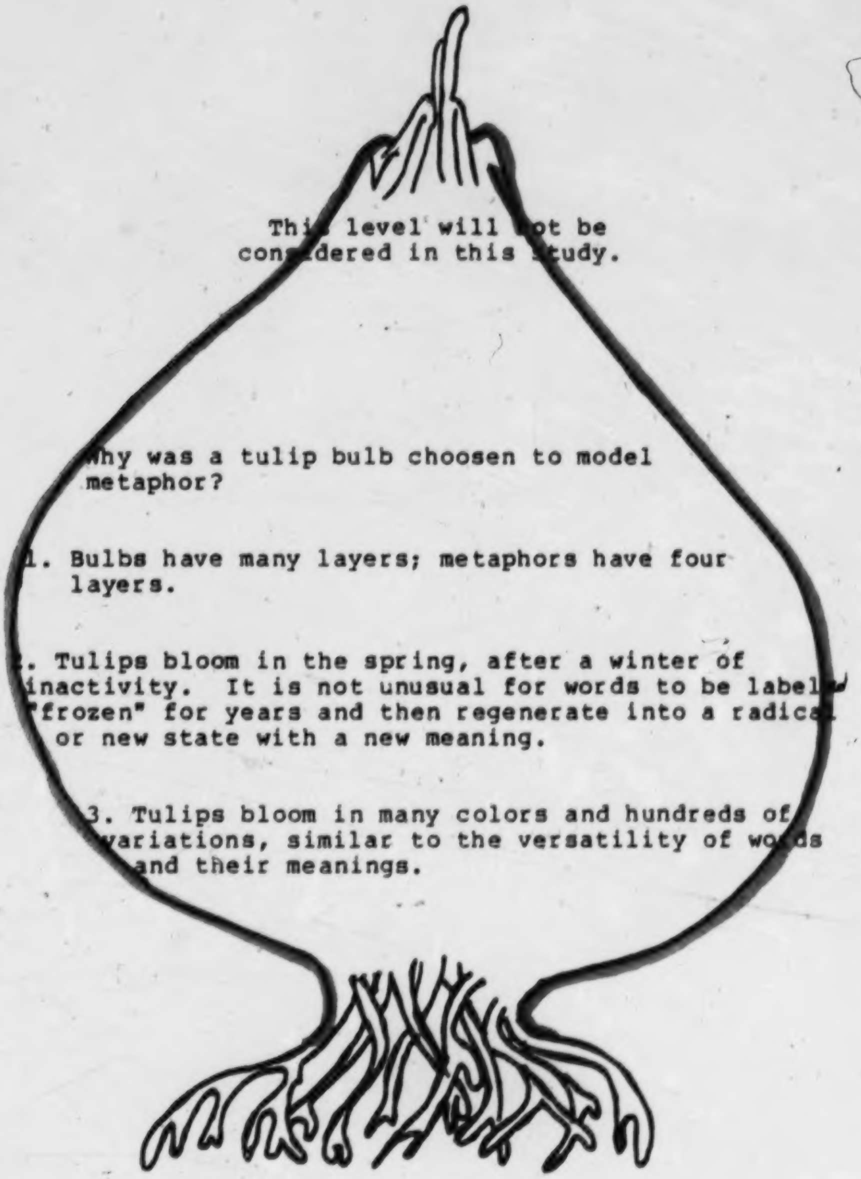

FIGURATIVE LANGUAGE
ALL OUR LANGAUGE
AND COGNITION
IS METAPHORICAL
UNDERSTANDING
CONCEPTUAL METAPHOR
METAPHORS FUNDAMENTAL
PRINCIPLES

Figure II-9 FIGURATIVE LANGUAGE



This level will not be considered in this study.

Why was a tulip bulb choosen to model metaphor?

1. Bulbs have many layers; metaphors have four layers.

2. Tulips bloom in the spring, after a winter of inactivity. It is not unusual for words to be labeled "frozen" for years and then regenerate into a radical or new state with a new meaning.

3. Tulips bloom in many colors and hundreds of variations, similar to the versatility of words and their meanings.

Figure II-10 METAPHOR: FUNDAMENTAL PRINCIPLES

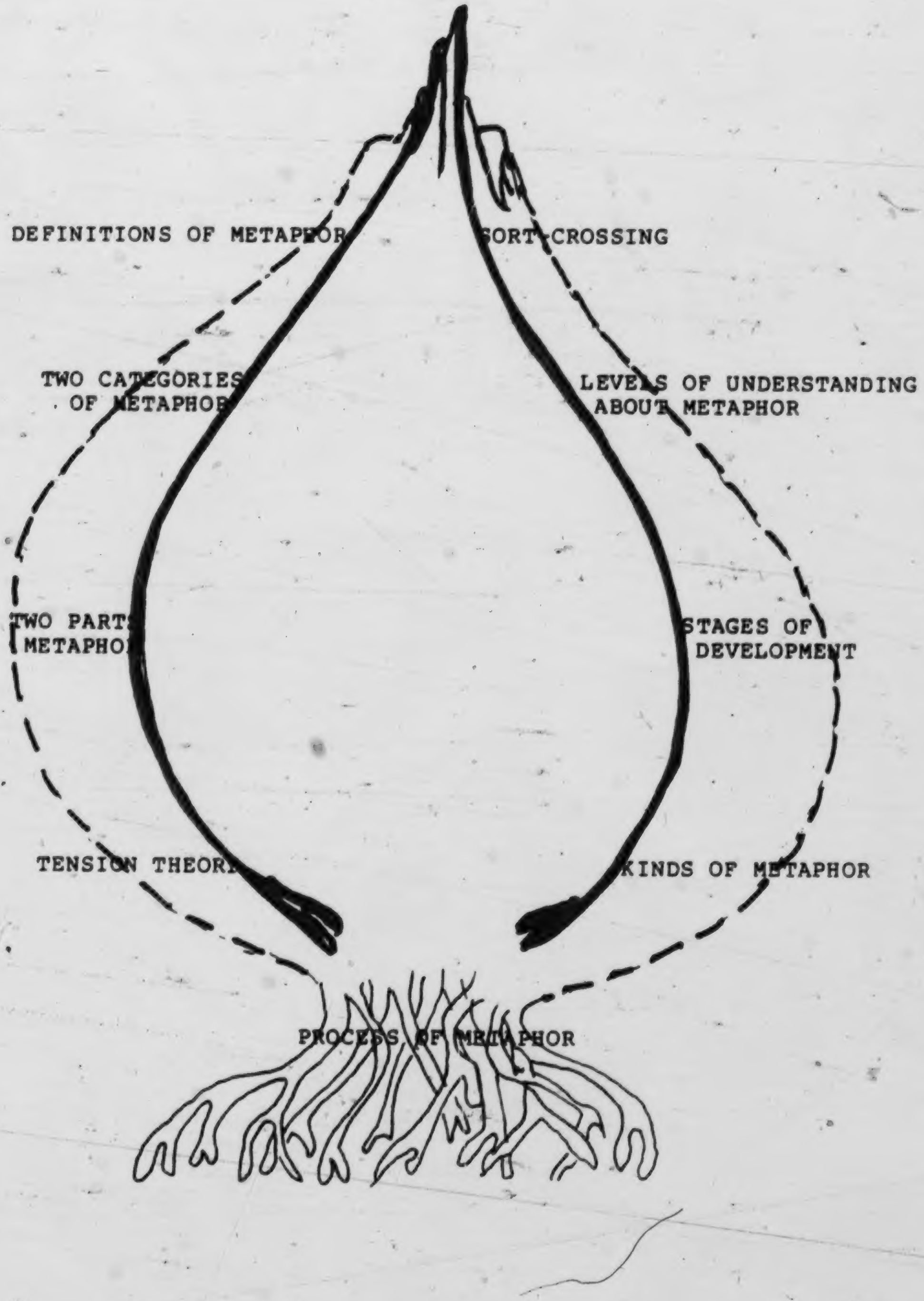
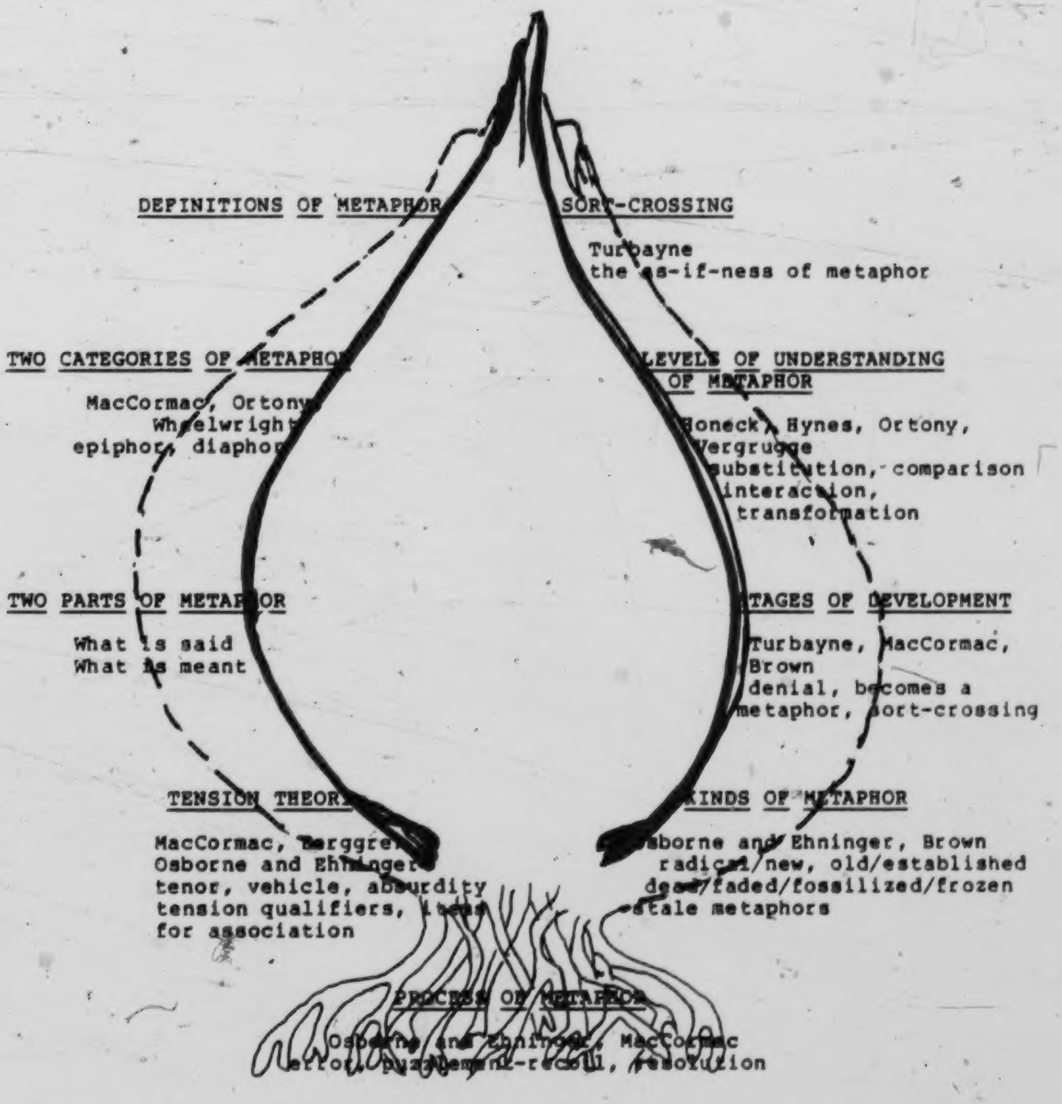

DEFINITIONS OF METAPHOR
SORT-CROSSING
TWO CATEGORIES OF METAPHOR
LEVELS OF UNDERSTANDING ABOUT METAPHOR
TWO PARTS METAPHOR
STAGES OF DEVELOPMENT
TENSION THEORY
KINDS OF METAPHOR
PROCESS OF METAPHOR

Figure II-11 METAPHOR: FUNDAMENTAL PRINCIPLES


DEFINITIONS OF METAPHOR
SORT-CROSSING
Turbayne
the as-if-ness of metaphor
TWO CATEGORIES OF METAPHOR
MacCormac, Ortony,
Wheelwright
epiphor, diaphor
LEVELS OF UNDERSTANDING OF METAPHOR
Honeck, Hynes, Ortony,
Vergrugge
substitution, comparison
interaction,
transformation
TWO PARTS OF METAPHOR
What is said
What is meant
STAGES OF DEVELOPMENT
Turbayne, MacCormac,
Brown
denial, becomes a
metaphor, sort-crossing
TENSION THEORY
MacCormac, Berggren,
Osborne and Ehninger
tenor, vehicle, absurdity
tension qualifiers, items
for association
KINDS OF METAPHOR
Osborne and Ehninger, Brown
radical/new, old/established
dead/faded/fossilized/frozen
stale metaphors
PROCESS OF METAPHOR
Osborne and Ehninger, MacCormac
error, puzzlement-recoil, resolution

CHAPTER 3

CONCEPTUAL METAPHOR

In attempting to understand metaphor a number of metaphoric concepts were discussed in Chapter 2. They were: sort-crossing, types of metaphor, levels of comprehension of metaphor, process of metaphor, stages in the life of metaphor, and tension in metaphor. This chapter will discuss conceptual metaphor using the following topics: conceptual theories of metaphor which includes the displacement of concepts theory, metaphorical and non-metaphorical concept theory, cluster concept theory, transformation concept theory, and root metaphor theory; and the awareness of metaphor. Awareness of metaphor is subdivided into uses and misuses of metaphor.

Each conceptual metaphor theory discussed below is a metaphor attempting to understand how we perceive our world, interpret our world, perceive our experiences in our work, and interpret our experiences in our world. These perceptions will change as our interpretations and experiences change.

Conceptual Theories of Metaphor

"Conventional metaphors," (Lakoff and Johnson, 1981) where much of our everyday conventional language is structured and understood primarily in metaphorical terms, have already been discussed in Chapter 2. Conventional metaphors pervade our ordinary everyday way of thinking, speaking, and acting. Metaphors also influence our conceptual system, in terms of which we both think and act. In fact, our concepts are fundamentally metaphorical in nature.

Concepts governing our thoughts are not primarily matters of the intellect. We seldom consider our everyday functioning. Our concepts shape what we perceive, how we get around in the world, and how we relate to other people. These conceptual systems play a central role in defining our everyday realities. Lakoff and Johnson (1980a, 1980b, 1980c, 1981) suggest that the way we think, what we experience, and what we do every day is very much a matter of metaphor.

Taylor (1984) writes that metaphor has come to be seen as an ubiquitous feature of our thinking and our discourse. It is the basis of the conceptual systems by means of which we understand and act within our worlds. Our conceptual system is not something we are normally aware of, so how do we find out what metaphorical conceptual systems do we have? Since communication is based on the same conceptual system on which we think and act, language is an important source of evidence for what that system is like (Lakoff and Johnson 1980a, 1980b, 1980c, 1981).

This section of the chapter will be divided into five subsections: displacement of concepts theory, metaphorical and non-metaphorical concept theory, cluster theory, transformation theory, and root metaphor.

Displacement of Concepts Theory

Schon (1963), an urban planner, attempts to explain how we develop our concepts with his "Displacement of Concepts" metaphor. He defines this metaphor as the "process of carrying over an old theory to a new situation." In Schon's view the old theory comes to be seen in the new situation or begins to project models for new situations. Schon sees the process as shifting from old concepts to new situations rather than applying old concepts to new situations. Schon (1963:62) sees this shifting process thus:

> 1. everything, and every expectation involved in the concept of a thing, can be structured in an indefinite number of ways. We can never be sure of having grasped them all.
>
> 2. how the thing is structured depends on what it is juxtaposed with.
>
> 3. when an old theory is symbolically transposed to a new situation, it is juxtaposed with it in the manner of a projective mode. We are asked to find aspects of the new situation related in the manner of the old. "Find the old X in the new Y."
>
> 4. through such a juxtaposition we are able to find in the new situation aspects related in the manner of the old, which we had not previously seen in the old.

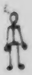
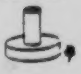
The old theory A is in a symbolic relation to a new situation B when

1. there is an intimation that B is A-like

2. A is taken as a condensed programmed for exploration of B

3. in carrying out a programme, expectations from A are transposed to B as projective models

4. for each of these projective models, aspects of B are seen to be related in A-like ways, where we had not been attentive to those relations in A before (Schon 1963:64)

These examples are simple projective tests. A is to be found in B, and B is found in A. An effect is to change the way B is perceived. For example (A) a schema of a person comes to be perceived as an outgrowth of (B) a pitchfork . Another example is when (A) a schema of a person  comes to be seen as a (B) column "resting" on a base . In both examples we come to see A in a new way, as well as B. We see the schema of a person rather than a pitchfork and we see a column as something standing on a base rather than a schema of a person. We have to see A in a new way in order to see A in B; and the new way of seeing A comes out of our finding A in B.

Schon visualizes this "displacement of concept" metaphor taking place in four phases. The first phase is transposition - the making of the metaphor. Transposition is the first shift of an old concept to a new situation.

There are no isolated concepts but only concept clusters or theories. For example, House (1983) says the concept evaluation is a cluster concept having a number of concepts and metaphors within it: industrial production concept, target metaphor, goal metaphor, and statistical model. This will be elaborated later.

The second phase is interpretation. Interpretation is the assignment of a concept from the old cluster to a specific aspect of the new situation. When the displacement of a cluster of concepts has begun, a potential for transposition and interpretation has been set up. The new situation has a conceptual structure of sorts before any old theory is displaced to it. Referring to a previous example, most people had a preconceived idea of "chaff" before the invention of radar. This pre-existing structure resists some transposition and interpretation, and there is a resulting adjustment in the process of displacement.

Correction is the third phase. Correction is like a mutual adaptation in which the old theory and the new concept-structured situation are modified in various ways to suit one another. With the development of the concept of "chaff" as a radar term, our notions of "chaff" changed as well as our notion of war.

Miall (1979) asked the following question: "Is it the word that changes or is it the concept that changes?" He says that the concept changes. If Miall is correct, it is necessary when understanding metaphor to look beyond the words to the concepts that they invoke. It is the concepts that interact, not the words.

The fourth phase is spelled out. Spelled out means that an attempt is made to work out the relation between these senses - the areas of community and difference between the old and the transposed theory. Schon (1963:87) sees that two possible ways of proceeding in the displacement of concept metaphor: begin with a problem and search for a metaphor which, when it is elaborated, yields a hypothesis for a solution; or begin with a metaphor, elaborate it, and develop a hypotheses from the elaboration.

There are many examples of this Displacement of Concept metaphor especially in the development of our language. For example, the word electric comes from the Greek word "ēlektron," which meant "amber" meaning "gleaming" or " the beaming sun" (Barfield, 1926). An example of a theory carried over to a new situation is the theory expaining the "circulation of blood." An elementary mechanical device, the pump, is used to explain the circulation of blood through the heart. In describing the heart we use words like "pump," "valves," and "suction." Darwin took the word "evolution" which had a botany meaning and gave it an exclusively biological sense relating to animals and man (Barfield, 1926).

Metaphorical and Non-metaphorical Concept Theory

Lakoff and Johnson (1980a, 1980b, 1980c, 1981) have formed a theory about concept metaphor. They claim that our conceptual system is fundamentally metaphorical. Nemetz (1958) states all theories of metaphor must be metaphorical. Lakoff and Johnson suggest, however, that the conceptual system consists of both non-metaphorical concepts and metaphorical concepts. Non-metaphorical concepts emerge directly from our experience and are defined in their own terms. Metaphorical concepts are understood and structured in terms of other concepts. These involve conceptualizing one kind of object or experience in terms of a different kind of object or experience. Lakoff and Johnson (1980a, 1980b, 1980c, 1981) describe three types of metaphorical concepts parallel to the non- metaphorical concepts. The following chart attempts to indicate the relationship between the non-metaphorical concepts and the metaphorical concepts.

Non-metaphorical concepts	Metaphorical concepts
1. spatial orientations- e.g. up/down, in/out, near/far front/back	1. orientational metaphors- e.g. more is up, control is up, good is up, rational is up.
2. ontological- e.g. arising in physical experience - entity, - substance, - person, - container	2. ontological metaphors- e.g. ideas are entities, -words are containers, -the mind is a container -the mind is a computer, -the mind is a brittle object, -vitality is a substance
3. structured experience and activities- e.g. eating, moving, transferring objects from one place to another	3. structural metaphors e.g. understanding is seeing, -life is a gambling game

Because metaphorical concepts are defined in terms of non-metaphorical concepts, they also show entailment relations parallel to those for non-metaphorical concepts. Entailment means that one part must be true if the other parts are true. For example,

Non-metaphorical concepts	Metaphorical concepts
money is a limited resource and limited resources are valuable	-time is money, therefore -time is limited resource -commodities time is a valuable commodity

Cluster Theory

Most concepts are abstract, write Lakoff and Johnson (1980a, 1980b, 1980c). However, no single, concrete, non-metaphorical concept is ever structured in exactly the right way to completely and precisely define any single abstract concept. As a result abstract concepts are typically defined metaphorically in terms of more than one concrete concept or the cluster concept. Each metaphor defines only certain aspects of an abstract concept and may be inconsistent and overlapping.

If we examine the concept of idea we see that it is defined by a rich and complex cluster of metaphors. Ideas are people, plants, products, commodities, resources, money, cutting instruments, food, and fashion. Each of these defines some aspect of the concept of idea; however, some of these metaphors are inconsistent. For example, "ideas are cutting instruments" is inconsistent with "ideas are people. People are not used for cutting and cutting instruments are made while people are not. "Ideas are fashion" is inconsistent with "ideas are food," since we do not eat and digest fashion.

There is also a possibility of an overlapping of metaphors within a concept. Overlapping occurs when some metaphors within a concept partially overlap in some respects. For example, some aspects of the concept "idea" have correlates in more than one metaphor. "Packaging" in the "idea are products" metaphor corresponds to "fashion" metaphor. "Parents" in the "ideas are people" metaphor corresponds to "producers" in the "ideas are products" metaphor. Both "products" and "food" develop and die.

Thus, we can understand abstract concepts in terms of many metaphorical definitions, each of which captures part of the concept. Abstract concepts are not defined by a single metaphor. Instead, they are defined by "clusters of metaphors." Each metaphor gives a partial definition. These partial definitions overlap in certain ways; but, in general, they are inconsistent and typically have inconsistent ontologies (Lakoff and Johnson 1980a, 1980b, 1980c, 1981).

Another reason why a concept includes several metaphors, Lakoff and Johnson (1980a, 1980b, 1980c) remind us, is that each metaphor highlights certain aspects of the concept and implicitly hides others. In fact, no single metaphor even comes close to being definitive. Each metaphor hides more than it highlights. It takes many different and inconsistent metaphorical perspectives to comprehend each abstract concept. However, Hoffman (1980) declares that metaphor does not hide any aspect, rather it simply highlights certain aspects of a concept. For example, in the metaphor "time's pencil" the metaphor is highlighting the marking aspect of time, not how "time flies," or "time stopping,' or "no time." These other aspects are not hidden; they are not mentioned.

Where do our concepts come from? Lakoff and Johnson (1980a, 1980b, 1980c) write that most metaphorical concepts depend on culturally relative activities and experiences. Even if a metaphor crosses cultural boundaries it would not be understood the same way. A North American concept like "ideas are fashions" would not have the same meaning in other parts of the world because "fashion" might be understood differently. Also, one would not expect to encounter the same experiences in other cultures and would not expect to find the same metaphors.

A good example is the concept "democracy." Not only is democracy viewed differently by differnt cultures, it has been viewed differently througout the centuries, (Patrick Watson The Struggle for Democracy (TV:1989). Pepper (1935, 1948), however, claims there are four world metaphors (mechanism, formism, contextism, and organicism) that cross the boundaries of cultures. Nevertheless, it would be hard to disagree that cultures would understand them differently, based on their unique cultural and historical experiences.

To summarize the "metaphor of concept" Lakoff (1982) makes nine statements:

1. Metaphors are conceptual, rather than linguistic, in nature.

2. Such conceptual metaphors are ways of understanding one domain of experience in terms of another.

3. Each conceptual metaphor sets up an idealized cognitive model of a domain.

4. These metaphorical models of a domain are typically not consistent with each other.

5. Concepts can be defined by clusters of metaphorical cognitive models which are mutually inconsistent.

6. Each metaphorical cognitive model characterizes a different aspect of the concept.

7. Human concepts are, in general, multi-faceted; that is, they have more than one aspect.

8. Multi-faceted concepts allow one to understand a domain of experience in more than one way and thus permit understanding of many aspects a domain of experiences.

9. In domains of experience that are social, interpersonal and personal, where the way people act depends in a significant way on what they understand the domain to be like, cognitive models have a role in determining actions and therefore in creating reality.

Transformation Concept Theory

Creating new metaphor means a leap of the imagination, theorizes Brown (1976). Creation requires two things. First, the creation of metaphor demands that we say 'No' to the organization of previous experience. Second, it also requires we rearrange knowledge into new forms and associations. A metaphor can create a new amalgam, blend, or combination in our understanding. New metaphors, especially when elaborated into models and theories, are not merely new ways of looking at the facts, nor are they just a revelation of what the facts really are. Rather, the metaphor in a fundamental way creates the facts and provides a definition of what must be the essential quality of an experience. A metaphor requires our circumspection and imagination, as well as an attitude of 'as-if-ness' in which we suspend what is taken literally. We must then take as literal what we know to be absurd.

Metaphors do not merely select their own data, continues Brown (1976). Rather they create or constitute their own data. They provide new ways of understanding, new domains of perception, and new language of thought. New metaphors not only represent appearances, they change them and even create new ones. New metaphors can create new theories.

Berggren (1962) declares that metaphor can suggest new meanings. First, this is done when the vehicle of the metaphor acts, as Black (1963) and Turbayne (1970) also suggest, as a lens or filter through which the tenor of the metaphor is viewed. The lens or filter highlights aspects of the tenor that might not be seen through another medium. For example, "students in schools are like plants in a garden" is a dominant educational metaphor. Viewing students as plants highlights aspects of students that are very different from the sculpture metaphor or the factory metaphor. Other examples of the filter metaphor are Cheverst's (1972:72) eight metaphors concerning students. (I have adapted Cheverst's metaphors from man to student.)

a student is a system of electrons
a student is a bundle of habits
a student is an angel
a student is a beast
a student is a soul
a student is a machine
a student is an animal
a student is divine

Here each metaphor introduces new meaning by construing the one in terms of another. It is not simply a comparsion or substitution of terms, but an example of transformation.

Second, the metaphorical construing introduces a meaning which is not even potentially present in the normal use of the word "student." And third, both the tenor, "student," and vehicle, "plant," are transformed and preserved. To construe life of a student as a plant is not only to organize or interpret student in a different way, it is also to give students and plants a significance that they might otherwise not have.

Stanford (1972:105) calls this peculiar and rather sophisticated intellectual ability stereoscopic of ideas. "The ability to entertain two different points of view at the same time on one idea that is by approaching a word through two different meanings." Berggren (1962) calls it stereoscopic vision. The perspectives of "student" and "plant" held prior to the transformation and subsequent to the transformation must both be jointly maintained. In other words, the process of metaphorical construing not only transforms both the tenor and vehicle, but by so doing often produces a new tensional referent whose meaning or being cannot be reduced to either of its interacting components (Berggren, 1962).

This stereoscopic vision or duality of metaphor works in two kinds of ways, declares Rapoport (1953). It can serve to clarify or to confuse; to open new vistas or to perpetuate existing myths; to organize thinking to make it fruitful or to regiment thinking to make it sterile.

Gordon (1961) suggests that two opposing things happen in his discussion of duality of metaphor. First, we are asked to link points of similarity between dissimilar things - students and plants. Second, we are asked to leave out or look past all the points of dissimilarity which, incidentally, contribute excitement and tension by holding student and plants apart even as they are being spoken of as similar. This metaphor, "students are plants," offers many opportunities to select associations which can lead to new insights. Within the potentialities of this metaphor are two extremes and all the gradations of the continuum in between. "Metaphor is irredeemably dual in its ground," declares Nemetz (1958).

Miall (1979:27) describes the process of transformation as, "at the moment of the metaphor's apprehension both the old, and the strange and new, are simultaneously present." The unfamiliar view of the subject may effect a permanent change in the thought of the reader-listener; however, the meaning of the contributing words remains stable and unchanged. Metaphor embodies a transformation in thought, writes Miall (1979).

Not only does transformation occur within metaphor but it also is able to translate all other vocabularies into its own, claims Brown (1976). Brown calls this the universal range of a metaphor. The metaphor provides us with a program for exploration and a potential agenda which might be developed into a formal theory with elaboration. The expansion of the metaphor can be viewed not so much as a testing of new hypotheses, but more as the invention of a new language. The adequacy of this new language is measured by the amount of translation we are able to effect out of the older terminologies into the new. New metaphors lie at the heart of new theories. However, metaphoric transfer is a two way street:

1. if we focus on the data as a metaphor for the theory, its special utility may be seen to lie in its brevity and simplicity.

2. the special advantage of the larger theory, as a metaphor for the data, lies in its breadth, its inclusiveness, and its translatability to other domains.

Verbrugge (1980) says that to comprehend a metaphor is to perceive familiar structures or transformations in an unusual context. It does so by inviting us to transform the topic into the vehicle. The transformation of the topic is partial because the topic is not re-identified completely as the vehicle. It is imaginal, because it is type of virtual experience. An aspect of a psychological relation or process, rather than a property of relationships holding over linguistic forms, transformation is psychological. And last, transformation is fanciful in the sense that the experience is unconventional and unusual. Other authors use different words to describe metaphors, for example, having mystery, play-thinking, playing, and imaginative. The transformation theory places metaphor in a different level of understanding rather than a substitution or comparison level which stresses the "as-if-ness" of metaphor. It gives metaphor power.

Haynes (1975:277) declares that humans are rational, purposive, and continually open to receive new impressions which modify previous knowledge. "Metaphor is simply one form of such change, but without it, such change would be virtually impossible."

Root-Metaphor Theory

Metaphor, according to MacCormac (1976), can serve functions other than suggesting possible experiences or expressing only what is partially known. Metaphor can also present a hypothesis that is much more fundamental and comprehensive in its application. This is the function of "root-metaphor." "A root-metaphor is the most basic assumption about the nature of the world or experience that we make when we try to give a description of it, (MacCormac 1976:93)." The function of the root-metaphor is to suggest a primary way of viewing the environment or experience. This way of looking at things assists us in expressing our insights. For example, it helps us build categories or create art forms. Our very notions of what is true and what is meaningful rest upon our underlying assumptions about the nature of reality. Without tentative statements about the nature of the world knowledge would be impossible, for we would have no way of organizing our perceptions into a coherent whole (MacCormac 1976).

How do we form root-metaphors? MacCormac (1976) theorizes that we first consider a common sense notion and then generalize by applying it to things, experiences, and events beyond those that are ordinary. By applying the concept beyond our immediate experiences, new categories are constructed to assist in the process.

MacRae (1975) believes there are some fifteen to twenty root-metaphors, one of which is derived from the common sense notion of the human body. From the symmetry of the body's erectness we derive our categories of direction: for instance, up/down, right/left, before/behind, over/under, and beside. Our concepts of relations in space come not only from our binocular vision but, above all, from our experiences of a fixed eye-level above a fixed ground. Certainly our ideas of dominance are connected with the visual dominance of our erect posture. Both our categories for classifying and dealing with space manipulatively and organizationally, our emotions about space, and the values we attach to direction in space are derived directly from our body form. We have moved from the concrete, the body, to the abstract, up/down and over/under.

Barfield (1926:177) also agrees with MacRae when he writes that people drew from their own bodies the "sense-experiences" of "force" and "pressure" and the like. From these experiences they invented tools and machines and based the science of mechanics. Next, they turned the science of mechanics into abstract "laws" and then preceded to re-apply the "laws" to the familiar objects from which they had first extracted them. The result was that they turned their previous notions inside out.

The root metaphor, continues MacCormac 1976), is retained only as long as it provides a basis for a theory that we accept as explaining the world or part of it. No system of explanation founded upon a root-metaphor will be completely successful in encompassing all types of experience. There are always competing ways of viewing the world, with different explanations. Some explanations better describe one type of phenomena than another and choices are made upon the basis of the criterion of "adequacy." This competition among various world views is similar to the problem of deciding why one theory is "better" than another. For example, we in the West find it very difficult if not impossible to accept the Buddhist and Hindi explanations of the world itself as a dream or illusion. We prefer to see the world in concrete terms because we are empirically-minded.

All disciplines use root-metaphors. For example, until the twentieth century the characteristic root-metaphor of the scientific theory was "the world is a machine;" therefore, "people are machines." The ancient Greek root-metaphor, "the world is mathematical" is another culturally entrenched root-metaphor. If the "world is mathematical," then "God is mathematical" (Davis 1986:233) and "people are mathematical." These root-metaphors influence the way in which people's explanations are constructed to describe the world and their experiences in it. The categories selected and our theory of truth all must be in accord with the basic way of looking at the world that the root-metaphor provides.

The human body is a machine, writes Embler (1954), and it works as a machine works, according to the laws of mechanics. This common belief is held among many social philosophers, she continues. We try to live up to the machine, to learn from the machine, to be more nearly machines, because we think they are better than we are. There is a fiction, writes Hubbard (1950),that a human being is a calculating machine capable of functioning in a 100 percent mechanical fashion.

Root-metaphors for the various disciplines always involve human experiences. The process of metaphor that often begins with ordinary language, moves to diaphor, then to epiphor, and finally back to ordinary discourse is reflected in the process in various disciplines. The function of metaphor is similar, even if the words are different for all discplines (MacCormac 1976).

Pepper (1935:369) states, "the root-metaphor theory is the theory that a world hypothesis to cover all facts is framed in the first instance on the basis of a rather small set of facts and then expanded in reference so as to cover all facts." The set of facts which inspired the hypothesis is the original root-metaphor. Pepper (1935:370-374) summarizes the consequences of his root-metaphor theory. First, alternative world theories have developed. These are based on different root metaphors. A few expand into hypotheses of world-wide scope and great adequacy. Each metaphor asserts and denies something of certain facts. The four most fruitful root metaphors are:

a) form and matter generated into the root-metaphor of transcendent realism

b) push and pull generated into the root-metaphor of mechanism

c) organic whole generated into the root-metaphor of objective idealism

d) temporal process generated into the root-metaphor of contextualism or metaphysical pragmatism.

Second, the above does not justify rejection of any or all of these theories. Just because one or several of the root metaphors are inadequate does not mean that they should be rejected or one be accepted as the one root-metaphor. Nor does it mean all of them should be rejected because all of them are inadequate. Despite their inadequacies, all root-metaphors are retained. Each gives information about the world that the others do not (Pepper, 1935.)

Each of the alternative relatively adequate theories gives a different and irreconcilable description of the "same" fact. This is the third consequence. The forth consequence is that alternative equally adequate world theories are autonomous. The adequacy of a theory cannot be judged by any other theory. Pepper (1935) asserts that a world theory is autonomous in its interpretations of facts and also autonomous in its criticism of its interpretations. For example, legitimate criticism of the idealism root-metaphor should only be in idealistic terms.

Eclecticism is confusing; it is the fifth consequence, states Pepper (1935). "Eclecticism is an attempt to interpret facts by means of incompatible sets of categories; categories generated from different root metaphor."

Therefore, eclecticism is a mixed metaphor, states Pepper (1935:373). To describe a theory, it is possible that more than one root-metaphor is necessary. Each root-metaphor furnishes a relatively adequate description of the limited group of facts, but more than one root-metaphor is needed to describe all facts. This idea has already been discussed earlier in "conceptual theories of metaphor" under "cluster metaphor."

Last, the root metaphor conception offers a means of obtaining clarity in metaphysics. This last consequence is a reverse of eclectic confusion. Once root-metaphors have been discovered and the characteristics of each set of categories is noted, then it is possible to untangle complex philosophic writing and to understand the world in which we live.

These four root-metaphors have become the basic concrete standards of judgment and evaluation according to Pepper's (1935, 1948) world hypothesis. Formism, otherwise known as realism, is associated with Plato, Aristotle, the scholastics, neo-scholastics, new-realist, and modern Cambridge realists. Democritus, Lucretius, Galileo, Descartes, Hobbs, Locke, Berkeley, Hume, and Reichenback have formulated their theories based on the root-metaphor of mechanism or naturalism. On the other hand, contextualism or pragmatism is the basis for such theorist as Pura, James, Bergson, Dewey, and Mead. Finally, organicism or absolutism or objective idealism is associated with Hegel, Green, Bradley, Bosanguet, and Royce (Pepper, 1948).

All three theorists, MacCormac, Pepper, and McRae, state that root- metaphor represents something fundamental and comprehensive. MacCormac (1976) summarizes all the theorists when he writes, "A root-metaphor is the most basic assumption about the nature of the world or experience that we make when we try to give a description of it." Root-metaphors must have a major epiphoric quality if they are to serve as cornerstones for the construction of conceptual structures. They can be central to a world view or paradigm.

An Awareness of what Metaphor does

Major Uses of Metaphor

There are many functions of metaphor. First, figurative language is used as a kind of language anomaly. Second, old theories are carried to new situations. The old theory comes to be seen in the new situation. The process is a way of treating the new as the old. Schon (1963) explains this process with his "Displacement of Concept" metaphor.

Metaphor, in this sense, is central to how we make sense and how we think of the world, situations, and things. They are conceptual designs that shape how we perceive reality, how we will set the problems we later try to solve, and how we generate meaning. Schon (1979) states that this view of metaphor is generally well accepted. This function of metaphor has previously been discussed in "conceptual theories of metaphor."

The third use of metaphor provides a deeper understanding. We begin with a problem and search for a metaphor which will, in its elaboration, yield a hypothesis for a solution. Schon (1979) labels this process as generative metaphor. It comes from the word generate: to generate a solution from a problem.

A generative metaphor, says Schon (1979:254), is the "carrying over of frames or perspectives from one domain of experience to another." He sees what is commonly called the problem-solving process as "coming to see things in new ways and the analyzing of generative metaphor" (1979:254). There may be a tendency to underestimate the importance of metaphor, asserts Schon. The essential difficulties in social policy and social problems have more to do with problem setting than with problem solving. Difficulties have more to do with how the questions are posed and what purposes are to be achieved than with the selection of optimal means for achieving answers.

Often analyzing the problem and describing the problem or the story that interprets the problem depends on the metaphor used in discussing that problem. Therefore, the direction of problem-solving is already set by the setting of the problem (Schon 1979). For example, a child comes into the kitchen crying. If the mother asks the child who made him cry, the direction of the answer is apparent. However, another answer is expected if the question changes to:

1. What did your older brother do to you?
2. What did you do to deserve punishment from your brother?
3. What happened?
4. Do you want your mommy to kiss you better?
5. How badly are you hurt?

The object of the problem-solving perspective is to search for solutions. Problems themselves are generally assumed to be given. Thus, it is assumed that we know, or can easily voice, the problems of crime, murder, rape, cities, inflation, pollution, racism, citizens' rights, and language, but that we cannot yet solve them. The task, therefore, is to find solutions to known problems.

But Schon (1979) claims that all problems are not clearly understood. Problems are, in reality, socially constructed by human beings in their attempts to make sense of complex and troubling situations. Ways of describing problems change from one century to another, one era to another, one town to another, or one society to another.

New descriptions of problems tend not to spring from the solutions of the earlier set of problems but to evolve independently as new features of situations come into view or prominence. In the 1970s, health problems were often described from a diet perspective. In the 1980s these same health problems are described from an air pollution perspective. The urban problem, for example, tended to be defined in the 1950s as "congestion," in the 1960s as "poverty," and in the 1970s as "fiscal insolvency."

Each view of the problem or the metaphor chosen to describe the problem conveys a very different view of reality and represents a special way of "seeing." Each view attends to a few salient features and relations from what would otherwise be an over-whelming complex reality. The particular view chosen gives the complexity of elements a coherent organization and describes what is wrong with the present situation in such a way as to set the direction for some future transformation. Through this process of problem construction, there is a leap from fact to values, from "is" to "ought."

The researcher, Schon (1979) writes, sees A and B and takes an existing description of B as a redescription of A. When A is seen as B the evaluation implicit in B is carried over to A. A simple example would be in the area of dating. A woman who dates two men, although they might be completely different, would quite naturally understand the relationship with the second man in some historical similarities as the relationship with the first man. Problems in the first relationship would be looked for in the second.

Humans naturally look for old things to define or to recognize the new. But what seems obviously correct in a new situation may, upon reflection, seem utterly wrong. Insofar as generative metaphors lead to a sense of the obvious, the consequences may be negative as well as positive. When we see A as B, we may not necessarily understand A any better than before, although we understand it differently. How well we understand A has something to do with how well we understood B to begin with; and, the way we see A and B leads us to restructure our preceptions of A. At any stage of the life cycle of generative metaphor, we may be seeing A as B. Such a vision might ignore or distort what we would take, upon reflection, to be important features of A (Schon, 1979).

If we are to avoid being used by the metaphors and really attempt to solve social problems, asserts Schon (1979), then it is important to become aware of the generative metaphor which shapes our perceptions of phenomena. It is significant to be able to attend to and describe the dissimilarities as well as the similarities between A and B. Last, we need to become aware of, and to focus attention upon, the generative metaphors which underlie our problems. When we become aware of the generative metaphors in our problems, our diagnosis and prescriptions cease to appear obvious. We find ourselves, instead, engaged in critical inquiry. Being aware of generative metaphor becomes a tool for critical reflection when we attempt to solve problems of social policy.

Embler (1954) also cautions us concerning metaphor. When we take metaphors, especially political and social metaphors literally as statements of identities, we must proceed with caution. We do not seem aware of the power of metaphor. The way we use language determines the social philosophy of our society. When we take metaphors literally, we are in danger of behaving as if something were true which is manifestly not true unless we proceed to make it so.

But, what metaphors do practitioners choose to solve the various problems that they might be involved in? Schon (1983) proposes the following theory. Practitioners have built up a repertoire of examples, images, understandings, and actions over a period of years. Their repertoire includes the whole of their experience insofar as accessible to them for understanding and action. When practitioners make sense of a situation they perceive to be unique, they see it as something already present in their repertoire. They see the unfamiliar, unique situation as both similar to and different from the familiar one, without at first being able to say why it is similar or different. The familiar situation functions as a precedent, or a metaphor.

Seeing this situation as that one, we may also do in this situation as we did in that one. When students see a see-saw problem as a familiar fulcrum balance bar problem, they can set up the new problem and solve it, using procedures both similar to and different from those they have used before. Gordon (1961) identifies this concept as "making the strange familiar."

The whole process of "seeing-as" and "doing-as" may proceed without conscious articulation. The capacity to see unfamiliar situations as familiar ones, and to solve the unfamiliar in the familiar, enables us to bring our past experience to bear on the unique case. Our capacity to "see-as" and "do-as" allows us to have a feel for problems that do not fit existing rules. When we are aware of our ability to "see" these as elements of our repertoire, we are then able to make sense of their uniqueness and do not need to reduce them to examples of standard categories. Through "seeing-as" and "doing-as," we build new ideas and test new models of the situation (Schon 1983).

Hester (1966) believes that "seeing as" is not part of visual perception. Rather he labels it as *metaphorical seeing* which has something to do with the meaning of language and not primarily with the words themselves. Other theorists (Brown, 1976; Miall, 1979; Verbrugge, 1980) attempt to understand this phenomena using the tranformation theory metaphor. Since "metaphorical seeing-as" functions between the parts of the metaphor, continues Hester, one or both of which must be image-laden, the metaphor means not just the literal words but includes imagery. Therefore, metaphorical imagery is *fused with* or *involved in* metaphorical meaning. The metaphorical aspect seeing and visual aspect seeing are similar in that both have an inherent duality which Berggren (1962) tags as "stereoscopic vision" and Stanford (1972) labels it as a "stereoscopic of ideas." He originally coined the phrase in 1936.

Ross (1981) believes that metaphors often express attitudes as well as expressing how we think about the world, situations, objects, and generally how we make sense of reality as Schon (1963, 1979) suggests. Robert Baker (1981:161) in his article "Pricks and Chicks" in the book *Sexist Language: A Modern Philosophical Analysis* clarify the way in which we identify something reflects our conceptions of it. All attitudes, writes Ross (1981), are attitudes towards or attitudes about something or another. Attitudes involve beliefs about objects and implicitly convey an evaluation of them. They are object-directed, non-propositional, and evaluative. Sometimes metaphor can express attitudes, but they do not always specify which attitudes are being expressed. Ross writes that metaphor express attitudes rather than literal beliefs.

Schon (1963, 1979, 1983) suggests that "generative metaphor" can be implemented in social policy problems, but is this the only place where they can be implemented? Gordon (1961) is involved in Synectics, the practice of using generative metaphor in problem-solving and problem-making situations. The definition of synectics is "the joining together of different and apparently irrelevant elements (Gordon 1961:3)." He claims that synectics can be used in many facets of life, for example, military defense, the theatre, public administration, education, and industry. An example of a problem-making situation was a group of people from various disciplines sitting down to invent a product or family of products which could grow to an annual potential of $300,000.

How to invent a new kind of roof which would be more actively serviceable than traditional roofs is an example of a synectics problem-solving situation. It was thought a white roof in summer would reflect the heat, while a black roof in winter would capture the heat. But how does the same roof change from white in summer and black in winter? Synectics is based on two premises: ~~the~~ making the strange familiar and the making the familiar strange. The roof problem is an example of making the familiar strange.

Gordon's (1971) book Metaphorical Way of Learning and Knowing points out how generative metaphors can be tools in the classroom as problem solvers for discipline problems, emotional problems, and in the instruction of concepts. Although Gordon began to study and experiment in 1944, he did not establish synetics groups in industry until 1955. But, generative metaphor has been used by others for centuries.

Gordon (1961) cites examples of the use of generative metaphor in other disciplines in other times. Thoreau's attempt to perceive the essential unity of the natural world, where he began with a perception of ice crystals on grass stalks and moved into mud, asbestos, and quartz is one example. The physicist, George Gamow, discovered the force within an atomic nucleus from a view of ordinary liquid. Edison's invention of the phonograph was a generative metaphor that came from Edison watching the motions of a paper man and sound vibrations. And, Kekule's benzene ring was a generative metaphor coming from his vision of a snake seizing its own tail and whirling. Generative metaphor has been practiced for hundreds of years, but Schon appears to be the first to attempt to understand it, to theorize about it, to label it, and to apply it to social problems and policy.

To summarize, the defining of problems (Schon 1963, 1979, 1983) and the perspective from which the problem is viewed is important. The ways we outline problems determines both the kinds of purposes and the values we seek to realize. We predispose the directions of solutions based on our repertoire of examples, images, understandings, and actions. Ross (1981) suggests that metaphor often express attitudes. Therefore, practitioners' repertoires include attitudes towards or about something.

Contrary to the problem-solving perspective, problems are neither given nor reducible to arbitrary choices which lie beyond inquiry. By being aware of the ways we state problems and by reflecting on the problem- solving processes which are usually tacit, we may consciously select and criticize the perspectives which shape our responses. New meaning is created when a metaphor is used and understood. New knowledge can result from the comprehension of language in general and the comprehension of metaphor in particular. Generative metaphor facilitate new perceptions, explanations, and inventions when defining and processing problems. The process should be used for critical analyses and critical reflection, declares Schon (1963, 1979, 1983).

In short, Schon suggests that we can spell out the metaphor, elaborate the assumptions which flow from it, and examine its appropriateness in present situations. The notion of generative metaphor then becomes an interpretive tool for the critical analysis of social policy. Since we already think about social policy in terms of certain pervasive and tacit generative metaphor, Schon believes we ought to become critically aware of them.

A fourth use of metaphor is models. "Scientific metaphors are called 'models,'" writes Rapoport (1953). Chapanis (1961) states, models are analogies. Analogies are "representations, or likenesses, of certain aspects of complex events, structures, or systems, made by using symbols or objects which in some way resembles the thing being modeled," declares Chapanis (1961:115). Scientific models, continues Rapoport, are developed with a full knowledge the connection between the metaphor and the real thing is primarily in the mind of the scientist. They are used as the starting of a deductive process where there is a "as-if-ness" about the model that enables the scientist to use it freely as long as it serves its purpose or until scientific knowledge forces it to be discarded because of its inadequacies.

For example, the "billiard ball" metaphor is a model of Boyle's Law relating to gases. Newton's mechanics brought forth models which treat people as machines made up of levers and similar linkages. From this model, for example, the pump model describes the circulation system, the computer model describing the mind, and the servomodel describing people's behavior by measuring everything in bits.

There are two basic kinds of models, declares Chapanis (1961): replica models and symbolic models. Replica models look like the thing being modeled in some respect, for example, world globes, replica models of ships, mannikins, mock-ups, and simulators. Symbolic models include the model of humans in a closed-loop tracking system where lines and arrows are used to symbolize the flow of information from one element in the system to another. Flow charts used to diagram the communication system of the brain and body. Mathematical models are a subclass of symbolic models.

Hoffman (1980:408) believes the distinction between theory, model, and metaphor suggests that, as far as the theory is concerned, the model is an interpretation. It is not the interpretation. There are three distinctions, writes Hoffman (1980:408):

> 1. equating models and theories or models and metaphors. Such equating allows one to say that theories can model other theories and laws can model other laws.
>
> 2. defining models as being symbolic means that no thing can be a model.
>
> 3. calling any formal representation, mathematization, quantified hypothesis, or conceptualization a model.

Models are used as an organizing function to explain facts as the organizing function. This function, writes Deutsch (1952), serves to point out similarities among events because models organize our world view and satisfy the need for order. A model also functions in three other ways. The heuristic function leads scientists to ask new questions suggested by the model. Second, the predictive function enables scientists to predict events on the basis of the assumptions implied by the model. And last, the measuring function enables scientists to quantify notions which had been only qualitative (Rapoport, 1953).

In economics, society appears as a market to the laissez-faire economist. This model has become a classic economic idea. But, as economic ideas grew, this model was no longer adequate. The market model cannot even account for purely economic phenomenon satisfactory, continues Rapoport (1953).

What good are models, questions Chapanis (1961)? He answers his question by citing seven uses of models.

1. models describe and help us to understand complex systems of events.

2. models helps us learn complex skills.

3. models provide the framework within which experiments are done.

4. models help us to see new relationships.

5. models help us predict when experiments are impossible.

6. models assist in engineering design.

7. models amuse us.

Three of the four major uses of metaphor have been discussed in some detail: the Displacement of Concept metaphor, the generative metaphor, and models as metaphor. For each, examples have been given to illustrate their uses in our society. The fourth use of metaphor, figurative language, is not discussed here because it does not apply to this research.

Other Uses of Metaphor

There are several other uses of metaphor. Hoffman (1979, 1980.) suggests six other uses. First, in the language of experimental design, metaphor can encourage new predictions, new demonstrations, and new experiments both of the hypothesis test and converging operation sort. Second, metaphor can suggest new theoretical entities or concepts, or reinterpretations of old ones. Metaphor can suggest new structural interrelations or similarities between the theoretical entities, that is, highlighting new categories of entities or properties. Fourth, metaphor may suggest new functional relations, possibly of a specified mathematical form.

Metaphor can play a crucial role in the creativity in experimentation and in the tipping of scales from confusion to insight. Fifth, metaphor has (a) social utility as the medium for expressing morals, (b) cultural utility in the expression of religious beliefs, in rituals, and (c) political utility as an aspect of rhetoric. Metaphor can often result in new descriptions or in choices between theories (Boyd, 1979; Chapanis, 1961; Hesse, 1966; Rapoport, 1953). And last, metaphor works in a theory like analogy works, but metaphor is analogy that is fancied-up by inference-making and resemblance-finding (Negel, 1961; Nemetz, 1958).

Ortony, Reynolds and Arter (1978) list five other functions of metaphor. First, it is the vehicle for linguistic change. Second, it permits the communication of things that cannot (or could not) be literally expressed. Third, it permits the formulation and recognition of new relationships (Ortony, 1975, 1976; Wheelwright, 1962). Fourth, metaphor has the capacity to relate new knowledge to old; therefore; it have great pedagogical value (Ortony, 1975). And, fifth, it may provide the possiblity of communicating a more holistic and vivid impression of a phenomenon. Each use noted here has been assumed to be a "good use," however, metaphor can be misused.

Misuses of Metaphors

Metaphor, writes Taylor (1984), comes to be seen as a omnipresence feature of our thinking and our discourse. And the basis of the conceptual systems by means that we understand and act within our worlds. Therefore, does it make a difference which metaphor we choose? Yes, Taylor states. An unreflective use of metaphor is indeed dangerous, especially when there is no longer any awareness of duality of meaning. It is also possible to become obsessed by our metaphors (Taylor 1984).

The first misuse described by Turbayne (1970) is the difference between using a metaphor and being used by it, between using a model and mistaking the model for the thing described. Turbayne suggests that the former is to make believe that something is the case; the latter is to believe that something is the case. According to Turbayne (1970), being used by metaphor or taking metaphor literally is a case of sort-trespassing. Sort-trespassing becomes problem when "teachers burnout." It is assumed that teachers are like fires. Fires can burn and burn out. If teachers are like fires, they too can burn vigorously and eventually become lifeless. It is a case of different sorts of fires.

There is no absurdity. If A is aware of the metaphor while B is not, A says correctly that B is being taken in or being used by the metaphor. B is taking the metaphor literally. A literal metaphor is no metaphor at all. The mask has become the face. Similarly in the case of models, A says that B takes the model for the thing; while for B there is no model. The model becomes the thing; there is no awareness or pretense for B.

A metaphor is only alive when there is realization of duality of meaning. When there is no awareness of such duality, when the metaphor comes to be taken literally, we are dealing with a "dead" or "hidden" metaphor. Sort-crossing has become sort-trespassing (Turbayne, 1970).

A second misuse is when metaphor acquire the status of myths (Rapoport 1953; Berggren 1962; Shibles 1974; MacCormac 1976; Hoffman 1979). MacCormac (1976) notes that along with beneficial powers of explanations of metaphor comes the temptation to transform the root-metaphor into a myth by adopting any theory founded upon it as a literal description of how things are. Shibles (1974) calls this the metaphor-to-myth fallacy.

MacCormac (1976) further notes that myths are explanations of human experience based upon tentative hypotheses that people take as literal descriptions of the ways things are. They are possible in any realm of human endeavor where metaphor is employed. Without metaphor myth is impossible. The reasons that people accept myths can be found in their beliefs that myths actually describe the state of the world.

Shibles (1974) writes that, when metaphor is taken literally, we expand the metaphor, reduce it to absurdity, and show it to be a disguised joke. Much of what we say consists of metaphor which is mistakenly taken literally. For example, our knowledge and definitions of "death," "emotion," and "Hello" are metaphorical.

In creating root-metaphors, states MacCormac (1976), people make assumptions about the nature of the world that stem from results of their own experience. MacCormac is especially concerned with theories. Theories are developed from these root-metaphors and come into "fashion." After a while the speculative metaphor upon which the theory is built is forgotten. The theory then becomes a myth. Its details are considered to be accurate descriptions of the world and the world is assigned the reality that the root-metaphor orginally only suggested.

The suggestive metaphor comes to express language so effectively that it loses it tension and becomes part of ordinary language. Examples include "God is the Word," "motion is direct physical force," "the world is a mechanism," and "science is mathematics." These theories are used to explain many other ideas and to develop many other ideas. "God is the Word" is central to many important philosophical ideas and beliefs in Christianity.

Every contemporary theory is potentially a myth. Myths arise from two sources (MacCormac, 1976:129):

1. from treating a hypothetical explanation as a literal description of the way things are.

2. from the root-metaphor underlying methodology where an act of believing transforms the speculative into the mythical.

Uncovering myths is always a retrospective discovery. From our present knowledge, we judge past explanations about the world and human experiences. Often another theory replaces the first theory and exposes many of the features of the earlier theory as erroneous. For example, Einstein's notion of relativity exposed Newton's theory of motion as a myth (MacCormac 1976).

Also a myth is a misuse of a metaphor, there may be accurate and useful material in myth. It can be worthwhile to interpret myths both to gain insights about how the world might be viewed and to learn about beliefs which people held in the past. Still myths are dangerous and should be avoided, asserts MacCormac (1976). It is dangerous to believe in the literal truth of any theory or to believe that the world really is as the theory claims it to be. When people believe a myth they behave according to the demands that it places upon them. Such thoughtless behavior is dangerous. For example it is dangerous to believe that teachers burn out, metal fatigues, the world is mechanical, schools are factories, or people are machines. Myth is dangerous when it breeds a considered false certainly.

It is better to avoid the trap of myth by realizing that most explanations are to some degree hypothetical, writes MacCormac (1976). If the language of the metaphor ever replaces the language of myth, people will be less confident of the knowledge they possess, but more humble and more willing to consider various alternative avenues of investigation. Considering all theories as tentative and reserving for the future the discovery that some statements within them may turn out to be false may be a more fruitful human posture. Myths develop when we forget that explanations are hypothetical, not when we remember that they are founded upon root-metaphors. MacCormac (1976) also cautiously points out that his descriptions of metaphor and myth are also theoretical and should not become myths.

Metaphor can be abused in many ways, writes Berggren (1962). The most serious way is when metaphor is transformed into myth. Myth is a believed absurdity, believed because the absurdity goes unrecognized. Myth occur when the mask, lens filter, or construing subject is mistaken for or equated with the subject construed.

Schon's (1979) generative metaphor has already been discussed from the point of view of uses of metaphor and really from a positive point of view. This metaphoric theory can be re-examined as a misuse of metaphor stance. Schon as a social-policy planner and especially as an urban planner sees a situation in which society's ills receive conflicting descriptions often expressed as metaphors. Depending on the particular social situation at the time, problem solutions may be wrong or inappropriate. Schon calls descriptions of problems "frame conflicts" whereas the solution is labeled "frame restructuring." The conflict of frames cannot be resolved by an appeal to the facts, because all of the "relevant" facts are embedded in the current metaphor that describes the problem. The solution, frame restructuring, involves the coordination and reconciliation of these conflicting descriptions.

Schon (1979) cautions us to be aware of how metaphor can constrain and sometimes dangerously control the way we construct the world in which we live. The warning that "generative metaphor" can generate its own solution can also be dangerous. Metaphor can fail to present an objective characterization of the problem situation, writes Ortony (1979).

A fourth metaphor abuse is brought to light in Reddy's 1979) conduit metaphor. Reddy develops a detailed example of a generative metaphor in language. This metaphor for communication in natural language is based on the notion that communication has an impact on our social and cultural problems. We treat language as a carrier of ideas, thoughts, and aspiration so that all a hearer-listener needs to do is to unpack the message and take out what was in it.

Reddy (1979) estimates that well over half of the terms used to describe communication are metaphors. Words are said to contain and transfer thought, ideas, meaning, or feelings. Thus, the reader-listener's task is to extract the meaning from the words. Meanings can come across or pour out. They can be captured, loaded, forced, pregnant, hollow, empty, buried, exposed, or lost. The conduit metaphor assumes that:

1. words have insides and outsides; they are containers where meaning can live inside

2. words are containers that hold ideas feelings, concepts like mental and emotional materials

3. the sender sends these containers to the receiver and upon arrival the receiver will understand without any effort on their part

4. if the receiver does not understand, it is the fault of the sender; they sent a damaged product

5. since the words contain the ideas they can be saved to be used later as in books, films, and tapes

6. the receiver does not to construct anything or guess about anything

7. for the receiver there is success with little or no effort

Based on these assumptions the framework of the conduit metaphor states that:

1. language functions like a conduit; transferring thoughts bodily from one person to another

2. in writing and speaking, people insert their thoughts or feeling in the words which are then conveyed to others

3. in listening or reading, people extract the thoughts and feelings once again from the words

4. thoughts and feelings are ejected by speaking or writing into an external "idea space"

5. thoughts and feelings are reified in this external space, so that they exist independent of any need for living human beings to think or feel them

6. these reified thoughts and feelings may, or may not, find their way back into the heads of living humans

Some examples are:

1. PUT those thoughts DOWN ON paper before you lose them.

2. That concept has been FLOATING AROUND for decades.

3. That THOUGHT IS IN practically every other WORD.

4. Can you actually EXTRACT coherent IDEAS FROM that prose.

5. You have to PUT each CONCEPT INTO words very carefully.

The conduit metaphor produces several effects, writes

Reddy (1979). If we save the words in some form we will be saving our culture. Second, humans do not have to restructure the world themselves. Third, once the words have been saved there is no more need for humans.

Ortony (1979) writes that Reddy argues that the conduit metaphor falsely presupposes a certain objectivity, in fact an objectivity that ignores the contribution of the hearer-listener's own knowledge and experience. This presupposition leads to erroneous attempts to solve various kinds of communication problems. For example, until quite recently it has led to erroneous attempt to uncover the psychological processes involved in language comprehension.

North Americans have a sophisticated system for mass communication, yet somehow mass communication has become more synonymous with less communication. Why? Reddy (1979) believes that we have the mistaken, conduit-metaphor influenced view that the more signals we can create, and the more signals we can preserve, the more ideas we transfer and store. We neglect the crucial human ability to reconstruct thought patterns on the basis of signals and this ability founders. The conduit metaphor lets human ideas slip out of human brains so that once recording technologies are in place, humans are no longer needed.

Reddy believes his conduit metaphor extends Schon's (1979) generative metaphor in that the conduit metaphor leads us down technological and social blind alleys. Both men have fundamentally the same theory. The way we talk about (Reddy) human communication and (Schon 1979) social problems often depends on root-metaphors that are essentially misleading and inaccurate.

Ortony (1979:6) summarizes Schon when he writes that Schon "proposes that in social contexts generative metaphors may result in a sort of cognitive myopia, in which some aspects of a situation are unwittingly emphasized at the expense of other, possibly equally important ones." Where Reddy, continues Ortony (1979:6), argues that "the metaphors we use to talk about human communication encourages us to 'see' that communication in the wrong way. [Metaphor] encourages us to see it from a nonconstructivist rather from a constructivist perspective."

Taylor (1984) writes that many metaphors masquerade as models. People can be fooled because it is easy to forget that usable parts of the metaphor need to be separated from the unusable. The metaphor of mechanism in biology can only be employed if one carefully excludes the notion of a mechanism requiring an inventor or a maker. It is possible to select only those parts of a metaphor that seem useful or prudent. The metaphor comes with both hidden connotations and hidden agendas. However, when I employ "mechanism" in biology or in education I cannot exclude any part. When other people perceive the metaphor they do not know the parts I have disregarded, they only view the metaphor "mechanism" as complete (MacCormac, 1976).

Chapanis (1961) notes six dangers in the use of models, whether they be replica or symblolic models.

1. models invite overgeneralizations, for example calling a computer a "brain"

2. models entice us into committing a logical fallacy

3. the relationships between variables may be incorrect

4. the constants assumed in the model may be incorrect

5. models are too often not validated

6. models building diverts useful energy into non-productive activity

To summarize, we have discussed five misuses of metaphors. Turbayne (1970) warns us not to be used by metaphor. We allow ourselves to be misused by metaphor when we take the metaphor literally or "sort-trespassing," instead of remembering that it is a metaphor or "sort-crossing." There are two important questions to be remembered. What is it to use metaphor? What is it to be used by metaphor?

MacCormac (1972, 1976) cautions us not to be misused by concept metaphors and allow them to become myths. Myths explain human experience using tentative hypotheses that people take as literal descriptions of the ways things are. It is dangerous to believe in the literal truth of any theory or to believe that the world really is as the theory claims it to be. When people believe the myth, they behave according to the demands that it places upon them. Such thoughtless behavior is dangerous.

Schon (1979) warns us about misusing generative metaphor

Figure III-1 UNDERSTANDING CONCEPTUAL METAPHOR

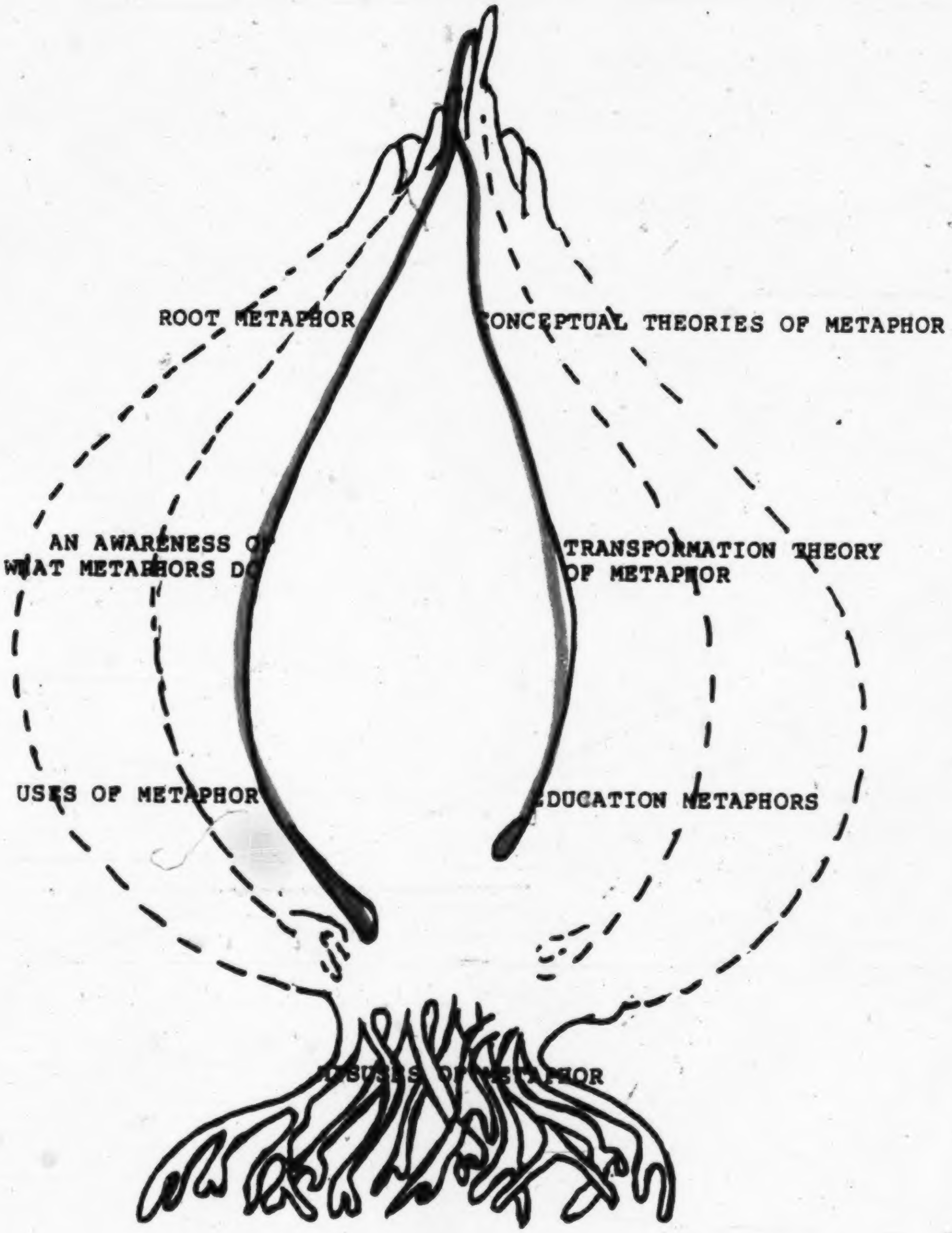

ROOT METAPHOR
CONCEPTUAL THEORIES OF METAPHOR
AN AWARENESS OF WHAT METAPHORS DO
TRANSFORMATION THEORY OF METAPHOR
USES OF METAPHOR
EDUCATION METAPHORS
MISUSES OF METAPHOR

Figure III-2 UNDERSTANDING CONCEPTUAL METAPHOR

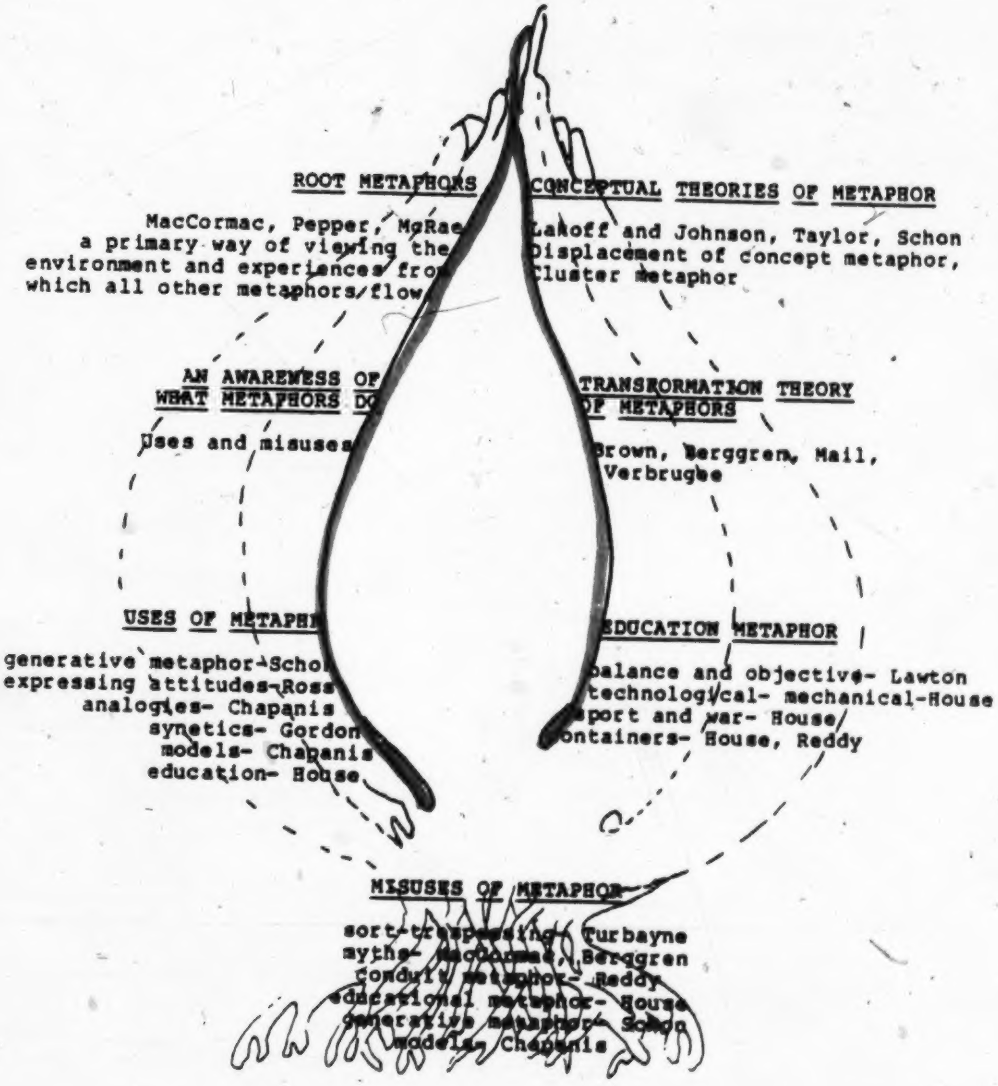
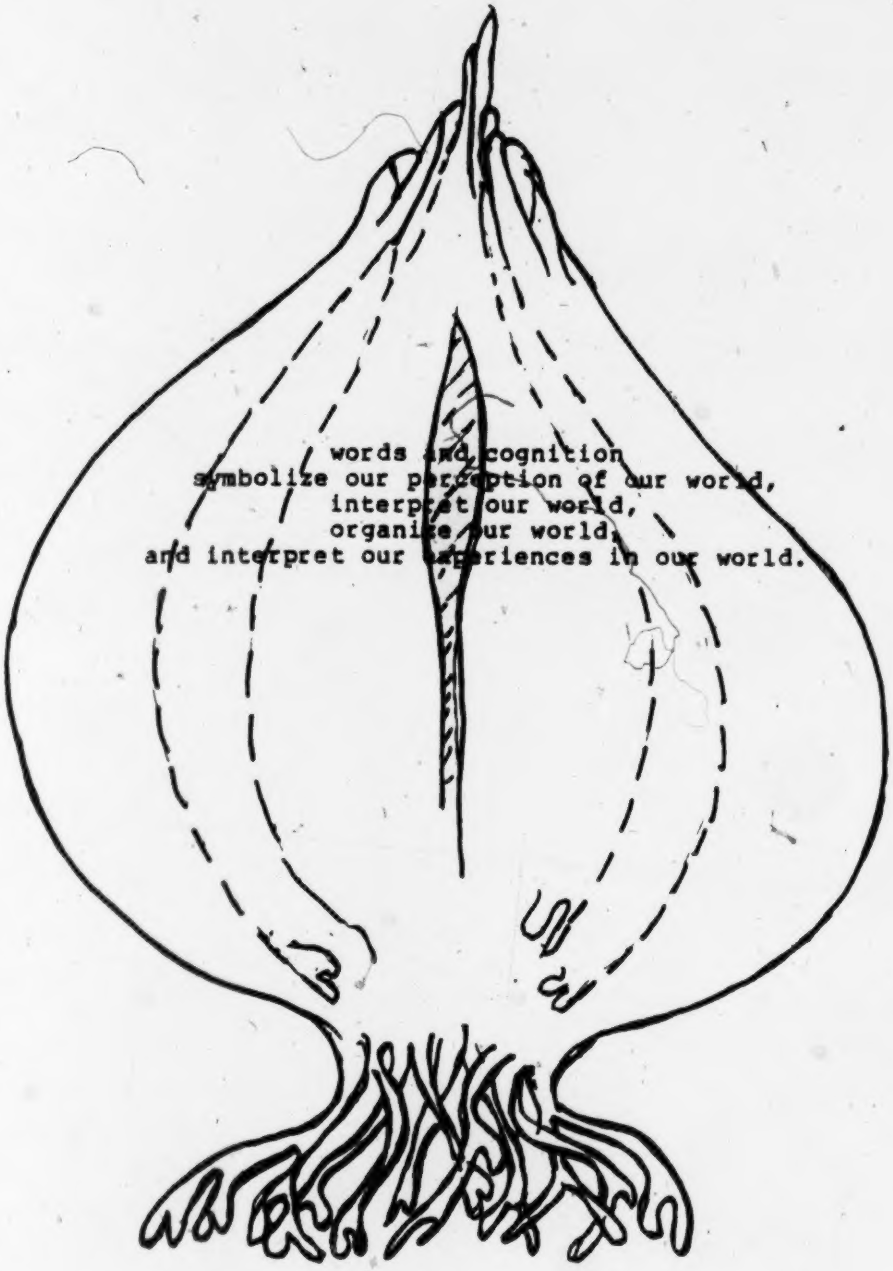

ROOT METAPHORS
MacCormac, Pepper, McRae
a primary way of viewing the
environment and experiences from
which all other metaphors flow
CONCEPTUAL THEORIES OF METAPHOR
Lakoff and Johnson, Taylor, Schon
Displacement of concept metaphor,
Cluster metaphor
AN AWARENESS OF
WHAT METAPHORS DO
Uses and misuses
TRANSFORMATION THEORY
OF METAPHORS
Brown, Berggren, Mail,
Verbrugge
USES OF METAPH
generative metaphor- Schon
expressing attitudes- Ross
analogies- Chapanis
synetics- Gordon
models- Chapanis
education- House
EDUCATION METAPHOR
balance and objective- Lawton
technological- mechanical-House
sport and war- House
containers- House, Reddy
MISUSES OF METAPHOR
sort-trespassing- Turbayne
myths- MacCormac, Berggren
Conduit metaphor- Reddy
educational metaphor- House
generative metaphor- Schon
models- Chapanis

Figure III-3 ALL OUR LANGUAGE AND COGNITION IS METAPHORIC



words and cognition
symbolize our perception of our world,
interpret our world,
organize our world,
and interpret our experiences in our world.

CHAPTER 4

METAPHORS IN EDUCATION

Introduction

Numerous metaphors organize our view of education. Yet, no one metaphor completely describes education. Each illuminates certain aspects of education but eclipses many other features, (Black, 1963; Turabyne, 1970).

This chapter will be divided into two major sections. The first section is named "metaphors applied in education" and includes: the curriculum metaphor including balance, scale and objectives; the industrial production metaphor which includes assemble-lines, machines, service, and pipelines; the contest metaphor which includes targets and goals; the conduit and accounting metaphors; and the evaluation metaphor that includes building and construction. These demonstrate the prevalent use of metaphors in education.

The second section will discuss the question, why use metaphors in education? Each of the metaphors of education discussed in this chapter are our symbols of how we perceive our educational world, interpret our educational world, perceive our experiences in education, and interpret our experiences in education.

Metaphor Applied in Education

Cheverst (1972:75) has organized a typology of educational metaphors. For example, child-centered metaphors are based on Plato, Augustine, and Rousseau ideas of growth, harmony, unfolding, assimilation, discovery, and readiness. Knowledge-centered metaphors are grounded on Decartes, William James, and Dewey ideas of store, foundation, stock, cells, bricks, and structure. While teacher-centered metaphors are rooted on Locke and Herbart ideas of guiding, shaping, moulding, directing, and imparting.

"Molding" and "shaping" metaphors highlight the teachers' role in selecting and organizing the child's environment as well as directing their moral responsibility for development. These two metaphors tend to ignore the child's own imaginative power and autonomy and gives no guidance at all on the "manner" of education. The student-centered metaphors of "growth," "unfolding," and "harmony" address these deficiencies but ignore the vital element of knowledge and discipline. Each metaphor sees education as a complex whole, but always greater and more elusive than the sum of its partial descriptions (Cheverst 1972).

Scheffler (1968) suggests several other metaphors describing education:

Education is growth	Education is art
Education is organic	Education is molding
Education is sculpturing	Education is transplanting
Education is forming	Education is science
Education is shaping	Education is adventure

Lawton (1984) believes that curriculum is itself a metaphor, "a course to be run." Within the curriculum cluster metaphor there are a number of other metaphors. Some of these include: core curriculum, balanced curriculum, spiral curriculum, streaming, setting, and banding. We can add several other metaphors describing curriculum: curriculum as a building operation, as a food, as a plant, as a product, or as a commodity. As Chervest and other theorists (Black, 1963; Turabyne, 1970) have indicated each of these metaphors focuses on some limiting aspect of curriculum, but at certain levels may well mislead.

For example, the balance metaphor actually refers to the "scale" or "weight" metaphor. Schon (1963) shows how this metaphor compares one thing to something else. The focus is on evaluation rather than discovery, on the process of deciding whether to do this or that rather than on the process of thinking what to do. Balance also limits. The weighing is always a comparison of two things or sets things. If more than two things are compared, they must be grouped in terms of sets of twos. Examples of balance include right/wrong, objective/subjective, and academic subjects/ complementary subjects. Academic subjects consist of mathematics, science, social studies, and language arts, while complementary subjects consist of art, drama, music, physical education, home economics, and industrial arts.

Lawton (1984) suggests that we first must agree about what a "balanced" curriculum is and, second, what curriculum components are to be balanced and their relative value. Often we assume it is similar to a "balanced diet" where the curriculum should have equal amounts of science, social studies, English, art, music, and swimming. Lawton (1984) states that when we talk of "a balanced curriculum" we are begging very important questions and the metaphorical language is obscuring the real issue. We do not have a well established agreement about the various curriculum ingredients even though the idea of a 'balanced diet' rests on well established scientific principles in nutrition.

Another serious and dangerous error in curriculum planning, according to Lawton (1984), is the objective metaphor. It is assumed curriculum planning must involve objectives as in behavioral objectives. The objective metaphor sometimes referred to as "goals," has very little clarifying power. The objective metaphor is an expression of behaviorist psychology and a mechanistic view of humans. A curriculum focused on objectives is a conservative doctrine because it is concerned with teaching the existing curriculum more efficiently, rather than calling it into question. Objectives are over-specific.

An objective is a clear and limited educational intention indicating not only a direction but a finishing point. But the very essence of true education is that it is open-ended. Objectives are not another way of saying "be clear about what you are trying to teach;" they are more specific. They involve a pre-specified change in pupil behavior which can be measured in a pre- specified manner.

Any metaphorical critique about objectives can not ignore one crucial point. There may be some important instructional levels within the education process when objective are useful. For example, teaching skills such as typewriting or modern language may involve some clear objectives. Spiral curriculum may also be appropriate in some contexts, but not in others. One problem in curriculum planning is that helpful procedures, such as objectives, do not simply work in all subjects or at all levels (Lawton 1984).

The objective metaphor implies that educational experience is a goal to be reached. Whereas, for a fully educational experience there is no limit. There is no end, no goal, no objective. Lawton (1984:90) cautions that, "we ought to be very careful in the way in which we use metaphors and equally cautious in accepting the metaphorical language of others - especially if we suspect that there may be an ideological wolf's lurking in the metaphorical sheep's clothing."

The most fundamental metaphor in education is the metaphor of industrial production, writes House (1983). To Miller (1976), schools and factories both have inputs and outputs, there is processing in both places, and pupils go from subject to subject like products go along the assembly-line. Repetitive work is done in both schools and factories.

Industrial production is a "cluster" metaphor (House, 1983). Several metaphors make up the concept including "education is a service with commodities," "education is a machine," and "eduction is a conduit." An important aspect of this metaphor is the delivery of services. These services are the utilities or commodities required by the those in the educational system. It is the duty of the education to supply these services to the cliental who are students, teachers, and parents. House's work (1983:10) can be adapted to show how the industrial production metaphor has influenced education. If education is seen as industrial production, the following points hold true.

Education as Industrial Production

1. Program elements are defined in terms of time, costs, procedures, or a product.

2. The delivery system consists of organizational arrangements that provide program service.

3. These services are delivered to a target population.

4. Program development is equivalent to designing the system.

5. There are production runs.

6. Services can be calculated in terms of services units delivered.

7. One should monitor the delivery of these services.

8. There are operational indicators of success.

9. A monitoring evaluation is an assessment of whether the program conforms to the design and reaches the target.

A particular type of industrial production is embedded in education; one consisting of an assembly-line (House 1983). Therefore, education can also be viewed as a machine. If so, the following points hold true.

Education as a Machine

1. A program consists of elements.

2. Program elements are discrete intervention activities.

3. Programs may be broad and complex, but also have component parts.

4. They are implemented.

5. They operate according to a design.

6. They produce benefits, effects, and outcomes.

7. They can be replicated and replaced.

8. They can be tested.

9. They can be fine-tuned.

10. Accountability means conformity to program specifications.

11. A major failure is unstandardized treatment.

12. Variables can be manipulated to achieve results

House (1983) employs yet another specific view of this "cluster" metaphor of industrial production. Curriculum [education], writes House (1983:11), can be seen as a pipeline or conduit. If so, these points hold true.

Education as a Pipeline or Conduit

1. A delivery system is a combination of pathways that allow access to service.

2. A major failure in systems is the deletion of the treatment to an insufficient amount.

3. Outcomes always represent changes in the level of measurable variables.

4. Contaminants may either enhance or mask true changes.

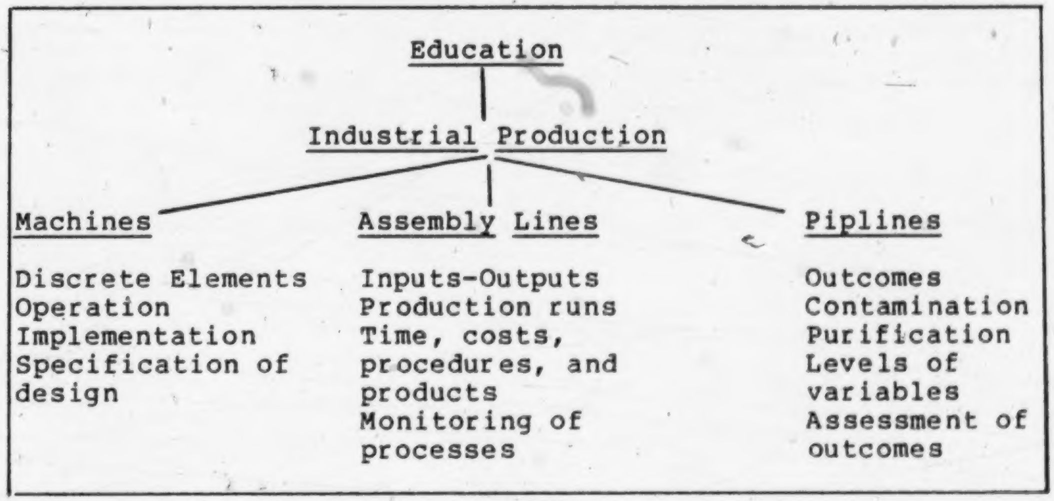
5. Assessing net intervention effects requires purification of outcomes by purging contaminating elements.

6. The point of assessing the magnitude of effects is to rule out causal links between inputs and outcomes.

7. The unreliability of measuring instruments may dilute the difference in outcomes.

As demonstrated above, education can be preceived as a machine, an assembly-line, and a conduit. Each fits the overall metaphor of industrial production. Each also emphasizes a slightly different aspect of the nature of industrial production and ellipses others. In thinking about education we may emphasize the way education is put together and operates to produce benefits. We may emphasize inputs and outputs, raw materials, or the labor that go into programs. Or we may emphasize the way benefits or services are delivered to the program recipients. Education, therefore, can be conceived as involving all of these aspects, and the various separate metaphors are used to emphasized different views (House 1983). Figure IV-1 demonstrates this concept effectively.

Figure IV-1 METAPHORIC CONCEPTION of EDUCATION


Education
Industrial Production
Machines
Discrete Elements
Operation
Implementation
Specification of design
Assembly Lines
Inputs-Outputs
Production runs
Time, costs, procedures, and products
Monitoring of processes
Piplines
Outcomes
Contamination
Purification
Levels of variables
Assessment of outcomes

Source: Adapted from House, 1983:12

Although the industrial metaphor dominates education, it is not the only metaphor to play a key role in educational thinking. The target metaphor is important in education (House 1983). Target is a military metaphor, and more specifically it is a war metaphor. We often discuss target problems, target population, and impact. Education has impact on the targets, students; therefore, the targets are problems that educational planners attack or alleviate. House (1983:14), as adapted, gives some examples.

Education as Targets

1. Programs and projects are aimed at the target problems.

2. The program can be misguided.

3. The problems are located in the target population.

4. Problems are distributed and have location, extent, type, scope, and depth.

5. A needs assessment determines the nature, extent, and location of educational problems.

6. Targets have boundaries and rules of inclusion and exclusion.

7. Programs have impact on the targets.

8. Impacts vary in magnitude.

9. An impact evaluation assesses the extent to which education causes changes in the desired direction in the target population.

A third metaphor applied extensively is education as goal (House 1983). The root metaphor of goal is sports. We use goals in education to mean purposes. The original definition of goals comes from the concept of physical distance in which a goal is set along a course like a race course, a game, or a sport. Players attempt to reach or attain that goal. To do so they had to beat another team or opponent. House (1983:15) shows how a goal in education influences our thinking.

Education Activities As Goal-Directed Movements

1. Goals are unattained standards.

2. Goals and objectives can be set and measured.

3. There are gaps between the goals and reality, between where one wants to be and where one is.

4. The intervention closes the gap between the two.

5. One seeks convergence between the educational

design and its implementation; there is *distance* between them.

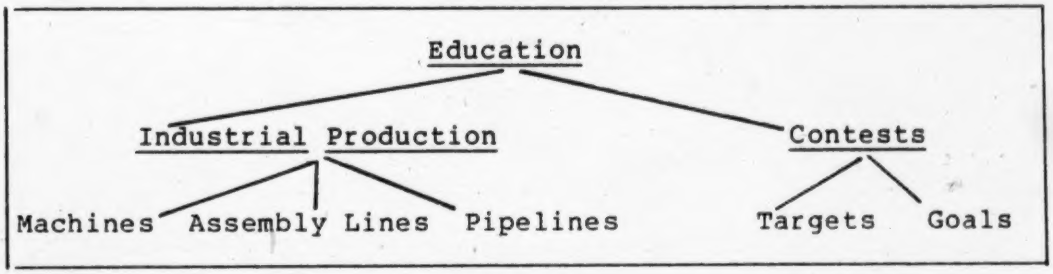
6. Evaluation can *direct* the *course* of social life.

7. Evaluation can be a firm *guide*.

8. Surveys assess whether the target has been *reached*.

The education metaphor consists of clusters of metaphors: the industrial production metaphor and contests. It can be diagramed like this.

Figure IV-2 AN EXTENDED METAPHORIC CONCEPTION of EDUCATION



Source: Adapted from House 1983:17.

Other metaphors highlighting education are the *conduit* metaphor, as described by Reddy 1979, and the *accounting* metaphor. House (1983) regards programs as part of education and views them as containers. Containers are seen as holding a substance, having a bounded surface, a center, and a limited space. Because programs are viewed as containers, they can be measured. Measuring involves the accounting metaphor. According to House (1983:21), we in education view programs as containers when we use following statements.

Programs as Containers

1. That is not much of a program.
2. The program does not have any content.
3. The program lacks substance.
4. That is the core of the program.

Evaluation is an integral part of education. The evaluation must be a firm assessment, a firm guide, produce firm estimates of effects and solid information, and not result in faulty conclusions. Thus we see the use of the building and construction metaphor. We expect evaluation to be firm, and solid, with no faulty conclusions (House 1983).

Different conceptions of what evaluation requires follow from these different metaphors of education: conformity to educational design, monitoring of production processes, and measuring of purified outcomes. The evaluation of education corresponds to the perceived nature of the education. Sometimes the emphasis is on design specifications and the parts of the program and sometimes it is on the inputs and outputs.

House (1983) states, if we view education as industrial production, targets, goals, or containers then we will evaluate it in the same fashion. Once we are committed to particular metaphors, we are also committed to certain thoughts and actions. It is therefore crucial for evaluators to become aware of metaphoric thinking in evaluation.

Why Use Metaphors in Education?

Why do we use these various metaphors in education? House (1983), suggests that we have little choice. These metaphors pervade our society. For example, production and competition are two values our society hold. Taken together, they entail winning. Winning is an important educational metaphor. Therefore, curriculum with it programs and evaluation has been conceived and structured through concepts derived from other metaphors which reflect how we experience the world. The ultimate purpose of this metaphorical structuring is to tell us how to act as education developers and evaluators. In this case we want to know how to win.

Cheverst (1972) and Johnson (1976) remind us to be careful which metaphors we choose to implement into education. Cheverst believes we have no other way of expressing our own feelings and inferring those of other people other than using metaphors. Each metaphor is a way of seeing things. Both theorists admonish us in education for our "willy nilly" borrowing of metaphors and their language, values, assumptions, and points of view without due consideration to educational values. Cheverst (1972:80) states educational metaphors should be taken as "innocent until they are proved guilty" "embraced with a wary passion, since they represent the only way we have talking about the things that really matter to us."

Schon (1979) and Lakoff and Johnson (1980b) suggest the framing of a problem will determine how we solve it. To perceive curriculum as industrial production, war, or sports, and evaluation as construction and buildings, is to act on the basis of those metaphors.

Generally the user is not aware that an underlying metaphor shapes our experiences of the actual phenomenon. Educational concepts are often derived from fundamental, generative, and deep-seated metaphors that remain hidden.

On a personal level, I preceive these curriculum metaphors as "men's" metaphors. In Western society men have dominated society, politically, economically, and socially for hundreds of years. Sports and war with concepts of competition and winning are integral part of a man's world. Industrial production is also a man's metaphor. I wonder what curriculum would be "seen as" if women had had the same power as men in developing education, curriculum, evaluation and change using "women's" metaphors.

Summary

Each of the metaphors discussed in this chapter indicates a different view of education and each ellipses other views of education. Each metaphor emphasizes different aspects of the nature of education. No one metaphor or its cluster is complete. Some of them even contradict others. For example, the building and construction metaphors contradicts the military metaphor. The military destroys while building and construction create.

Education as a cluster metaphor is very complex. There is a need to recognize its complexity by understandings its many metaphors. These metaphors will be re-highlighted in later chapters when discussing student report cards. The last three chapters are the foundations of understanding for student report cards. Chapter 6-9 will analyze student report cards. Dominant metaphors will be evident as the analysis contuines through the chapters. Chapter five is a literature review of student report cards.

CHAPTER 5

A LITERATURE REVIEW OF THE STUDENT REPORT CARDS

Introduction

Report cards are sanctioned devices intended to summarize student performance. Since student performance is so important to both parents and children, the report card often arouses passions and controversies among students, their parents, and the community at large. Some report cards consist of narratives, but most consist of brief, terse symbols (letter grades or numerical ranking.) Students advance from kindergarten to university and college throughout North America society receiving such report cards. This chapter discusses five topics related to report cards. They are: the function of report cards, the problems with report cards, the history of student report cards, the characteristics of current student report cards, and the grading and reporting systems.

The Function of Student Report Cards

There are three basic reasons for reporting pupil progress, states Giannangelo (1975). The first is to inform the pupil; the second is for pupil guidance; and, the last to inform parents of the academic growth of the child. If the report card conflicts with personal expectations; if the child or parents do not understand what the report card means; if the report card emphasizes the negative or is ambiguous; or if the parents do not understand the objectives of the school there may be conflict and lack of cooperation between the home and the school. It is imperative that a report card fulfill the requirements of information and guidance.

Parents and teachers want, claims Wise (1975), report cards that specify specific strengths, weaknesses, areas for improvements, and ways or suggestions of ways to help. Gilman (1974:157) writes, "grades do serve a function for most students." Both students and their parents want to know how much the student has learned. Students frequently seek reassurance that the evaluation procedures used by their instructors are indeed fair and reasonable. Grades help counselors establish empathy with teachers and enable students and their parents to realize how differences of opinion can occur. Gilman feels that there is empirical and theoretical evidence that grading can aid students' achievement in that the report card offers motivation, reinforcement, and communication. This theoretical evidence is embedded in the areas of psychology, sociology, and economics.

Psychologically and theoretically speaking, continues Gilman (1974), grades and report cards function as reinforcers, motivators, and symbolic communicators. For example, students are reinforced after they have had a good report card and tend to want to do it again. If good grades are important to students, it is because they have been taught to both need good grades and to fear the results of not getting them.

Two forms of motivation cause a student to desire to do well in learning activities. Intrinsic motivation occurs as a result of a student's interest in the subject. Extrinsic motivation occurs as a result of praise, teacher approval, points, and grades. Grades and report cards generally serve as extrinsic motivators. The report card communicates to the parent that the child is or is not performing well (Gilman, 1974).

Gilman (1974) also theorizes that six systems function in evaluating students: laissez faire, socialistic, egalitarian, social Darwinisn, fascism, and contract. In the laissez faire system students' marks are based on the amount the individual student produces. Benefits are granted on the basis of need in the socialistic system. A socialistic system is often the most difficult to defend because teachers use grades as motivators. Appropriate grades are assigned for enhancing a student's continued academic growth.

Benefits are distributed equally in the egalitarian system. Everyone receives exactly the same benefits. In the case of grades, all students receive the same grade or students determine their grades by drawing lots through a lottery. Social Darwinism occurs when benefits are granted on the basis of power; consequently, students whose parents are active in the PTA or students who are trouble makers are assigned "appropriate" marks.

A fifth system, Gilman states is fascism. Marks are assigned based on conforming, "rocking the boat," or causing problems for the teacher. The last system is the contract system. Grades are granted on the basis of fulfillment of a promise. Teacher and students formally agree on the tasks students must perform to receive their desired grade. Students are in competition with themselves rather than against others. Teachers use one or more of these economic systems, often without thought of the consequences. Although they remain controversial, most educators believe that grades and report cards do have a function, either good or bad, as an educative device and as an evaluative system.

Problems with Student Report Cards

There are a number of general problems with the report card. Mannello (1969:305) writes that the traditional grade reporting system using A B C D F has been labeled "one of the greatest obstacles to effective education." Report cards, states Leary (1975), are probably the single greatest written communication link between schools and parents. They often create needless anxiety, shame, or disappointment for many students and parents. Many educators and parents have not yet discovered that grades do not accurately reflect growth. Others refuse to recognize the need for improving our archaic evaluation system, says Leary (1975), and resist any form of change.

Parents "ground" their child for failure to achieve the list distinction "honour roll," Leary (1975) states. Many parents are deceived by a belief that grades are a strong motivating factor to learn. This myth continues in spite of much evidence to prove beneficial learning takes place through the development of self commitment based upon personal meaning.

Society identifies with labels, rating scales, and the grading of its products. Educators allow and encourage the use of these concepts even though they are contrary to the very essence of our knowledge of human uniqueness. To many students grades are a means to an end, a goal to be achieved. Some students perceive grades as highly restrictive because they cannot explore personal interest or enrichment topics (Leary, 1975).

Schools are continually expanding their course options for students but the pressures for good grades often smother their innate quest for learning. Finally, Leary (1975) writes, some students find grades repulsive. Grades for these students are not a challenge, but rather a direct threat.

Gilman (1974) cites numbers of frequently used arguments against grades. Grades can destroy the student's self-concept. Grades introduce an undesirable and injurious competitive system into the academic setting. Subjective evaluation of the quantity or quality of learning is based on as much objective evidence as possible. The grade is "a symbol purported to express a measurement or evaluation of academic achievement" (Gilman; 1974:157). Some students consider the grade to be a symbol of the teacher's approval. Finally, the grade communicates to parents that their child is or is not performing well.

Realistic, factual descriptions of student development report cards, writes Wise (1975), do not tell what is specifically being taught. An A in reading could mean several things: (1) the student is reading above the grade level; (2) the student is one of the better readers, but is not reading above the grade level; (3) the student is reading as well as the teacher thinks she/he can read even though the student is actually one of the poorer readers in the room in terms of absolute achievement.

Wise (1975) asks, what is wrong with grades? First, there is confusion about the assessment of achievement with personal worth, especially for low achievers who often withdraw or rebel. Second, with repeated failure, students come to expect failure. Third, often there is more grade related anxiety among high grade students than among other students because some bright students strive for high marks at the expense of personal integrity. Last, often the grade is used by parents and teachers as a threat or bribe. There is a built-in fear for the student.

There are a number of problems with the report card. Giannangelo (1975) has collected, from other authors, fourteen limitations of report cards:

1. Too many report cards list subject matter without any explanatory subcategories. If a child does not understand particular concepts, cannot apply what is learned, or has difficulty in reading, these specific inadequacies are left unreported. In general, one symbol stands for the universe of knowledge. Such reporting almost insures that diagnosis of difficulties will not be offered by a report card.

2. Letter grades are neither descriptive or analytical. An "A" or a "D" does not tell children or their parents how students are growing or failing to grow. To encourage growth, children and parents need descriptive statements which will enable them to pinpoint strengths and weaknesses to build on.

3. Reporting letter grades can never assure that appropriate credit is being given to growth. A focus on final achievement for educational objectives encountered by the youngster assumes inappropriately that all students are homogeneous. Such reporting systems implicitly deny individual differences.

4. Since letter grades represent pupil progress in terms

of a combination of objectives, the teacher can never be certain that each objective within the combination is being appropriately weighed.

5. The interpretation of letter grades becomes impossible when a teacher attempts to include an evaluation of effort expended and other personality traits into a single mark. There is no way to determine whether a low grade is the result of lack of achievement, lack of effort, or a combination of both. The fact is that most teachers don't know themselves why a student received a final mark.

6. Most current reporting systems give both parents and children vague feelings of pleasure or shame with little knowledge of what went into these teacher judgments. Reporting measures are generally efficient, rather than substantive.

7. Grades leave much to the imagination or to the individual interpretation. Single grades can never attend to the complexity of life or the school experience.

8. Report cards include no description of the basis for evaluating the student's work. Do the grades indicate the pupil's present standing or do they indicate the progress since the previous report? Does a high mark in a low ability group mean the same as the identical mark in a high

ability group? Furthermore, when students have more than one teacher, grades must be interpreted through the individual vision of particular teachers. Few teachers see achievement in the same way or value the same sorts of accomplishments.

9. Parents tend to interpret high grades as indicative of good work and low grades as indicative of poor work. They often fail to realize that a mark on a report card may be a function of children's intelligence, sex, teacher, and class, as well as the effort they expend and the objectives they achieve.

10. Many report cards have attempted to make the meaning of marks clear by using terms such as outstanding achievement, above average, needs improvement, etc. However, these explanations are general and subject to different interpretations.

11. Grading on ability tends to maximize comparisons between children. The consequent stigma attached prevents slow children from knowing where they stand in relation to others in the group.

12. Grading on ability is incongruous with everyday life. This type of grading rewards effort, whereas everyday life rewards accomplishment.

13. Statements such as "Your child is working up to ability" are ambiguous. They tell the parents nothing about the actual level of achievement of the youngster.

14. Letter grades in ability grouped situations give a false sense of values to the less able student as well as doing damage to the superior student. The students who get low grades often acquire an inaccurate indication of their ability when they receive a high grade for work that is inferior to what is normally expected of youngsters at that particular age level and grade level. Students who get high grades can often get A's without "cracking a book." It is very difficult to convince students that they are not working to their capacity when the marks on their report card are the highest possible. This situation encourages mediocrity among superior students.

The History of Student Report Cards

Chansky (1975) states that during this century there has been very little change in the report card. From 1900-1930 the report card contained percentage ratings of academic performance. The mid-thirties saw an adoption and diffusion of the letter grade, while the forties saw an introduction of the marking of nonacademic areas: social emotional development, work habits, and emotional development (Chansky:1975). Since 1975 there have been few publications about report cards. During the past twenty-five years there has been only fifteen articles abstracts in the Current Index of Journals in Education (CIJE), yet report cards are an important component of reporting to both the student and parents. They have a tremendous impact on the school curriculum and how the curriculum is taught.

Ryan and Ryan's (1973) study verifies Chanksy's statements. The following table (V-1) shows a history of the types of report cards and their use in the school systems of United States.

This table indicates that, in 1973, 68% of American schools evaluated students using letter grades. Only 16% of the schools still used the percentage system dominant in 1900. Only 4% of the schools were evaluating with other systems, for example, pass/fail, conferences, or graphs. And last, 9% of the schools were using combinations of systems, for example, letter grade and ratings, or percentage and conferences. The results of Ryan and Ryan's work suggest very little desire to change the student report card in the first seventy-five years of the 20th Century.

Ryan and Ryan also comment that the most substantial changes in report cards occurred from 1900-1920. As well the most significant changes occurred from 1920-1960s. At the same time, there has been little or no change from 1960 to 1974.

Characteristics of Student Report Cards

A study of the characteristics of report cards in use

Table V-1 HISTORY OF THE TYPES OF REPORT CARDS

Study	LETTER GRADES	PERCENTAGE	MISC.
Smith & Dobbin * (1900)	most		
Chapman & Ashbaugh (1928) *		51%	
Wisconsin Committee (1928)*		50+%	
Billet (1933)	80%		
Hill (1935)	60%	40%	
Bermar (1943)	72%	28%	
Roelfs (1955)		17%	
Gansen (1960)	77%	23%	
Vroman (1962)	80+%		
Terwilliger (1966)	70%	26%	
NEA (1970)	83%	10%	
NLS (1973) *	68%	16%	13%

Source: Adapted from Ryan and Ryan 1973:35
NEA- National Educational Association
NLS- National Longitudinal Study
* - Studies not listed in Index of Educational Journals

during the 1971-1972 school year was made by Chansky (1975). This study consisted of a sample of 380 districts of the 17,500 public elementary and secondary school districts in the United States. The study consisted of the analysis of opening comments, course title, nonacademic areas, and marking codes.

Opening comments, writes Chansky (1975), varied. However, they often cited the purpose of school as promoting the growth of the child. These comments often dealt largely with reasons for failure. Few report cards detailed the curricular aims for the grade. Most cards, especially at the secondary level, did not prepare the recipient for the card contents nor did they emphasize a superordinate-subordinate school-home relationship. Many secondary schools emphasized deviance and inadequacies of the student, rather than reinforcing a student's assets. Elementary report cards, in comparison to secondary report cards, more often suggested that parents visit the school for an exchange of information about the child. Planned conferences were not common at any level.

Report cards in elementary grades either listed specific activities or a general heading with several subtitled activities. Specific activities were more often characteristic of kindergarten, while the general heading with subtitled activities was more characteristic of elementary school cards. Chansky (1975) noted that, with increasing grade level, skill development decreases in importance and the use of skills to solve problems increased in importance. Chansky (1975:188) inferred that "children are regarded at first as passive recipients of information and later as active shapers of their own learning." He also noted there was a decline in emphasis in communicating what they have learned to others.

Rating of personal qualities is more a phenomenon of the lower grades than the secondary grades. With increasing grade level there is a decreasing listing of specific academic skills, number of work attitudes, and social-emotional behavior; a change in emphasis of work attitudes; and an increasing marking of general academic areas. The view of children in these report cards ranged from a passive recipient of knowledge with power to mobilize their strengths to active extender of knowledge but seemingly without developing skills in exchanging this knowledge (Chansky, 1975).

There is great diversity in rating codes, writes Chansky (1975), especially in the higher grades. The prevalent codes were:

Kindergarten:
satisfactory, needs improvement, .
satisfactory, improving, needs improvement.

grades 1-3:
outstanding, unsatisfactory; above average, average,
below average; satisfactory, unsatisfactory,
improving;

grades 4-6:
A B C D F;
Superior AA A BA Low.
S U (satisfactory, unsatisfactory)
O A U (outstanding, average, unsatisfactory)

grades 7-9:
O A U;
A B C D F;
Needs Improvement or Satisfactory.

grades 10-12:
A B C D F;
N I (needs improvement, improving)
O A U. (outstanding, average, unsatisfactory)

The meaning of the code for rating academic subjects varied with passage, prestige, position, and endorsement. Few report cards implied adequacy. For rating of dispositional areas, the most common theme was adequacy followed by prestige and position.

Chansky (1975) had great difficulty in reconciling report card evaluations to a philosophy of education. He suggests that the main purpose of early education is to enculturate the child. The purpose of all levels of schooling, however, is to nurture the individual talents of a child. He believes that one purpose of secondary school education is to direct students in vocational directions compatible with their talents, achievements, and interests. To some extent report cards at the elementary level do fit the "enculturation" purpose. However, the report cards do not often address themselves to the child as an individual. Some high school report cards deal with vocational selection, but too few encourage a definite vocational direction.

Evaluation systems used on student report cards

Report cards can be divided into two parts: (1) the types of evaluation used and (2) reporting systems. The types of evaluation can also be subdivided into two categories: graded evaluations and nongraded evaluations. There are six different graded evaluations: (1) two-category, (2) five-categories, (3) more than five categories, (4) give grades but do not tell the student, (5) contract system, and (6) mastery performance approach curriculum (Terwilliger, 1971 and Kirschenbaum, Napier, and Simon 1971). Each system has its own strengths and weaknesses.

The nongraded evaluations consist of ten types: (1) check lists, (2) written evaluation, (3) student self-evaluation, (4) one-on-one parent-teacher conferences, (5) graphs, (6) charts, (7) ratings, (8) pass/fail, (9) credit/non-credit, and (10) special report (Terwilliger, 1971; Kirschenbaum, Napier, and Simon, 1971; Walling, 1974; Lewis, 1969). Each system has its own strengths and weakness.

Although the literature indicates that there are two major systems, my research indicates that both of these systems are based on the same evaluation root metaphor - the scale. Each of the six graded evaluation systems and ten nongraded systems are variations of scale evaluation. Because both systems have the same root metaphor, they are all considered as one type of evaluation system in this study. Scale evaluation will be discussed in much greater detail in later chapters.

Types of Reporting Systems

Reporting systems can be divided into three types: single mark, dual mark, and multiple marks. The traditional concept of a marking system, the single mark system, involves a single set of symbols which is adopted for recording and reporting a global value judgement of the achievement of each student in each school subject. Terwilliger (1971) writes that it is imperative that the frame of reference used in defining marks be explicit when single-mark systems are implemented. This frame of reference must be consistent with the prevailing philosophy in the school system and should be accepted by all teachers even if they don't personally endorse the frame of reference which has been adopted.

Many schools experiment with the dual marking system. The ability-normative system is the most popular. It combines the frame of reference most appropriate to administrative decisions (normative) with the frame of reference which has the greatest diagnostic potential (achievement with respect to ability). These use two different sets of symbols. The percentage represents the percentage of students at a level. For example

Normative	Ability
A- Outstanding (10-20%)	1- Achieving above level for level expected for ability.
B- Above Average (20-30%)	2- Achieving at level expected for ability.
C- Average (30-50%)	3- Achieving below level expected for ability.
D- Below Average (15-20%)	
F- Failure (0-5)	

The multiple marking system is the third type of marking system. There are two types of multiple marking systems (Terwilliger, 1971). Many schools have adopted multiple marking systems as an alternative to the single-mark approach. The first is a more detailed evaluation of the separate aspects of performance that are combined in the typical single-mark evaluation. For example, teachers may be asked to rate specific components of achievement such as: (1) evidences independent thought; (2) seeks more than superficial knowledge; (3) follows directions; and (4) makes regular preparations as assigned. A second form of multiple marking employs alternative frames of reference. These could include dual systems, triple systems, and quadruple systems.

Effective Report Cards

What should an effective report card contain? Walling (1975) has four suggestions. First, the report card should show the basis for evaluation. The goals or objectives for the teacher and the school should be linked with the reporting instrument. The skills students are expected to develop should be stated. Other criteria used in determining the evaluation or rating should be given (Brown 1970:106; DeMott and Fistler 1973:86; Lewis 1969:158-159; McCarthy 1967:61; Siblerman 1972:77.)

Second, the report card should show the student's performance. Progress according to ability, quality of performance, and teacher evaluation of the student's effort should be recognized. Positive characteristics and performances need to be included (Lewis 1969:158-159; McCarthy 1967:61.)

Third, the report should be direct and clearly stated. This should include conformity of terms and symbols. Words open to widely varied interpretations should be avoided. It should be easy for parents to read (Lewis 1969:158-159, 185.) Last, the report should provide options for teacher and class differences (McCarthy 1967:61.)

Vars (1983) states an appropriate marking system should have:

1. an emphasis on measuring progress in terms of the individual's potential
2. student self-evaluation
3. appropriate comparative evaluation
4. an evaluation of personal-social development and reported separately from academic progress
5. an encouragement for teacher, student, and parents to write personal comments
6. a provision for parent-student and/or parent, teacher, student conferences are provided on a regular basis

Before any change can be contemplated, writes Leary (1975), educators must know why they are changing their evaluation methods and they must be sensitive to the emotion which parents and others attach to the old method.

Summary

Report cards are sanctioned devices intended to summarize student performance. Gilman (1974) asserts that there is empirical and theoretical evidence that grading can offer motivation, reinforcement, and communication for the student. This evidence is found in the areas of psychology, sociology, and economics.

The 1971-72 study of American student report cards suggested ten characteristics. The first three are: (1) The purpose of school was promoting the growth of students. (2) There were few detailed curriculum aims of the grade or subject seen in student report cards. (3) There was a lack of preparation for student report card contents especially in secondary school.

The review of the literature indicates that there are basically two types of evaluations used in report cards: graded evaluations and non-graded. Although there are a variety of types of systems, my research indicates that all of these systems are variations of one evaluation type, the scale. Scale evaluation is discussed in later chapters. There are also different varieties of marking systems used in report cards. Each of these systems has advantages and disadvantages.

Theorists suggest that, to be effective, student report cards should show the basis for evaluation. Goals or objectives should be addressed on the reporting instrument. Other criteria used in determing the evaluation or rating should also be given. Student report cards should show the student's performance according to ability, quality of performance, and teacher's evaluation of student's effort. Positive characteristics and performance need to be included. Student report cards should be direct and clearly stated including conformity of terms and symbols. Despite a variety of types, report cards have not really changed during this century (Chansky, 1975), nor have there been many published research studies on student report cards made in the past ten years. Still student report cards remain an important component of reporting to students, parents, and society.

CHAPTER 6

PHYSICAL CONTENT ANALYSIS OF ALBERTA REPORT CARDS

Chapter Overview

This chapter will outline and analyze the physical contents of 80 student report cards from 21 Alberta districts at three levels: elementary, junior high, and senior high. The analysis is divided into three major areas. The first analysis studies the part of the report card that contains the generic superintendent's message, reporting student progress portion, number of reporting student periods per year, number of lates and absentees, and the need for parent/guardian signature. The second analysis studies the portion of the report card designated to evaluating attitude, effort, work habits, and teacher's comments. The last analysis evaluated the school subjects taught. The promotion page is a fourth section of student report cards; but, it will not be thoroughly analyzed.

Introduction

To collect a representative sample of report cards, I mailed requests to 31 Alberta school jurisdictions for copies of their current report cards. Twenty-two jurisdictions (68%) responded, sending 85 report cards.

These report cards covered the breath of schooling, evaluating early childhood, elementary, senior high, and special education. One district sent only their policy handbook. Although it was not crucial to the study, the jurisdictions were randomly chosen. Every fifth school jurisdiction, listed in the Alberta School Jurisdiction Active List published by the Alberta Teachers Association was picked.

Table VI-1 below contains a sorting of the sources of report cards. In this chapter, "N" will represent number and "%" means percentage.

Table VI-1 TYPES OF JURISDICTIONS THAT RESPONDED TO THE REQUEST FOR REPORT CARDS

Number and percentage Jurisdictions	N=total number of requests sent	N=number of requests received	N=%
Counties	5	4	80%
School Divisions	4	3	75%
Public School Districts	9	7	78%
RCSS School Districts	11	7	64%
Department of National Defence	2	0	0%
Regional School District	1	1	100%
Total	32	22	69%

Throughout the study the term "district" will be used generically to indicate jurisdictions that sent report cards.

Early in the study, I decided to eliminate the special education and the five early childhood report cards for two reasons. It became apparent as I was analyzing the elementary report cards that there was more than ample data without the five early childhood report cards. Furthermore, my interest was generally secondary. I also excluded the district policy handbook, thus leaving 21 districts and 80 report cards.

As I studied the report cards, I looked for evaluation concepts that were utilized redundantly. Several key concepts emerged. These concepts include: effort, attitude, social awareness, work habits, and subject area (Language Arts, Social Studies, Mathematics, Science, Physical Education, French, Art, Music, Religion).

Part One: Preliminary Information

Number of Report Cards in this Study

The 21 districts represented in this study provided 80 report cards. There were 42 elementary report cards. One elementary report card had four reporting periods with a different set of evaluation featured in Language Arts and Mathematics for the first three. As a result, when analyzing Language Arts and Mathematics, I employed the figure of 44 elementary reports to reflect this particularity. One report card was utilized by both the elementary and the junior high schools, so it was included in both conferences, interviews, written comments, and coded comments.

Table VI-2 below indicates the number of systems practiced in each of the three levels: elementary, junior high, and senior high.

Table VI-2 NUMBER OF EVALUATION SYSTEMS USED ON REPORT CARDS

Divisions of schools / Number of grading systems	Elementary N=42	Junior High N=20	Senior High N=18
1. One system			2
2. Two systems	4	2	6
3. Three systems	20	3	4
4. Four systems	13	7	4
5. Five systems	4	5	2
6. Six systems	1	3	

The next table, Table VI-3, illustrates which evaluation systems were applied in Alberta. Table VI-4 illustrates the most dominant evaluation in systems in the 21 districts.

Three terms in these two tables need explanation: planned conference, interview/conference, and coded comments. A planned conference replaces one reporting period's report card. Parents/guardians visit the school to discuss their child's progress. An interview is a personally initiated meeting between parents and teachers to discuss the student's report card or stu- dent's problems. This interview may be requested by either party.

The term coded comments referred to a list of number comments which were already printed on the report cards

Table VI-3 TYPES OF EVALUATION SYSTEMS USED AT DIFFERENT DIVISIONS OF SCHOOLS

Divisions of schools	Elementary		Junior High		Senior High	
Number of report cards	N = 42		N = 20		N = 18	
Types of evaluation systems / Number and percentage	N	%	N	%	N	%
Percentage	6	14%	14	70%	14	78%
Letter Grade	26	62%	16	80%	5	28%
Letter Rating	24	57%	15	75%	3	17%
Number Rating	19	45%	4	20%	3	17%
Interview/Conference	26	62%	13	65%	4	22%
Written Comments	39	93%	15	75%	11	61%
Coded Comments	2	5%	11	55%	10	56%
Planned Conferences	4	9%				

Table VI-4 TYPES OF EVALUATION SYSTEMS USED AT THE DISTRICT LEVEL

Number of report cards	N = 21	
Types of evaluation systems / Number and percentage	N	%
Written Comments	20	95%
Letter Grade	17	81%
Letter Rating	16	76%
Interview/Conference	16	76%
Percentage	15	71%
Coded Comments	13	62%
Number Rating	12	57%
Planned Conferences	4	19%

before they were submitted to the teachers. These comments typically related to attitude, effort, work habits, attendance, and request for an interview.

Number of Student Report Cards per year

Not all report cards were sent home the same number of times per year. The number varied from two, three, and four times a year. Within this study, elementary schools with planned conferences had one or two report cards per year. Senior high schools operating semester or trimester systems had two or three report cards per year.

Table VI-5 represents the number of reporting at each level (elementary, junior, senior). Because two senior high schools used one report card to reflect both their semester and trimester programs, I assumed there were 20 senior high report cards. Therefore, 82 report cards were represented in this table.

Table VI-5 **FREQUENCY OF REPORTINGS PER YEAR**

Number of report cards per year	Two		Three		Four		Not known	
Number and Percentage / Divisions of Schools	N	%	N	%	N	%	N	%
Elementary	6	14%	9	22%	26	62%	1	2%
Junior High			6	30%	12	60%	2	10%
Senior High	6	30%	3	15%	9	45%	2	10
Totals	12		18		47		5	

Within the 21 districts, eight elementary report cards indicated a planned conference program in addition to report cards. Two report cards showed four reporting periods, one of them a conference. One report card specified three reporting periods with one conference. Four report cards stated that there were four reporting periods including two conferences. And, one report card denoted three conferences and two report cards. Five senior high report cards used a semester program, while two indicated employing a trimester system.

Superintendent's Messages

Fifty percent of the report cards contained a message from the superintendent or principal of the individual school. Of the 80 report cards, 28 (35%) were elementary report cards, 8 (10%) were junior high report cards, and 4 (5%) were senior high report cards.

The superintendent's messages can be divided by intent into three headings: (1) the purpose of the school, (2) the purpose of the report card, and (3) the relationship between school and religion. Below are examples of each of these types of messages. The first example discusses the purposes of the school:

Example 1: The Purpose of the School

> The purpose of our schools is "To ensure individual student development through effective education". We recognize that learning is a continuous process and that students learn at different rates. Therefore we believe that evaluation should be continuous and should indicate each student's progress and achievement in different programs in relations to his/her individual abilities, and in relation to his/her peers' achievement. Parents are encouraged to maintain contact with teachers regarding student progress. Written reports on programs of instruction and on individual student progress are completed and shared with students and parents in November, March and June. A parent-teacher conference in September gives the teacher and parents an opportunity to share student, program, and school information. Parent-teacher conferences in November, March, and June provide for in-depth discussion of the student's progress in relation to peers.

The second example discusses the purpose of the report card.

Example 2: The Purpose of the Report Card

> This report is not designed for the purpose of comparing the pupil with others of his class, but of informing the parents of the progress the pupil is making in all-around development.
>
> The gradings are simple and direct. It is believed that better work and more lasting results are achieved when pupils are not dominated by a rigid marking system. This report will be sent to you three times during the year. Special reports may be sent at any time. Please sign this report and return promptly. You signature does not mean that you are satisfied with the gradings, but it should mean that you have given them careful consideration. Parents should feel free to interview the teacher as circumstances may require on matters relating to the pupil's progress.
>
> You will contribute to the progress of your child by assisting him to attend regularly and punctually. Good health, good physical condition and sufficient hours of sleep are necessary for satisfactory progress.
>
> Parents are requested to encourage their children in the reading of good wholesome books. Extensive reading is an aid to school progress.

And finally, the third example highlights a superintendent's explanation of the relati[illegible]hip between the school and religion.

Example 3: The Relationship of School and Religion

> Catholic Schools must be strongly committed to the ideals of Catholic Education. This means providing an opportunity for students to achieve academic excellence and to grow spiritually, socially and physically in a Christ-oriented environment.
>
> The progress report is used as a formal means of communicating to parents the progress and achievement levels of the student relative to educational goals.
>
> Parents are encouraged to carefully examine the data presented herein and make personal contact with the staff for a more comprehensive understanding of the student's growth profile.

Reporting Student Progress

If repord cards contained an administrative message it usually came first in the report card. The second message on many report cards was a policy statement about student progress addressed to parents. This policy statement was usually only one or two paragraphs, although at times it was lengthy and involved several headings. Some examples of these headings were:

A. Program Description
   Student Development and Achievement
      a) individual student development
      b) standard of achievement re provincial curriculum
   Parent-Teacher Conference

B. Evaluation of Student Progress and Description of Studies
   Rating for social and emotional development
   Levels of achievement

C. Progress Reporting Procedures
   Reporting Student Progress
   Progress Reporting Procedures

D. Attendance
   Discipline
   Homework
   School promotion Policy

E. Promotion Policy

F. Grading Policy

Of the 80 report cards submitted to this study, 19 (24%) stated a student progress policy in their report cards. In a further breakdown, 13 (16%) elementary report cards, 5 (6%) junior high report cards, and 1 (1%) senior high report cards presented this information. The senior high report card was a junior/senior high combination.

These student progress policies differed in their content. For example, 14 (18%) report cards stated their policy concerning evaluation. Of the 14 report cards, 8 (1%) were from elementary report cards, 4 (5%) were from junior high report cards, and 1 (1%) was from senior high report cards.

Six (8%) report cards communicated policy to parents. Of the six report cards, three (4%) were from elementary, two (3%) were from junior high, and one (1%) was from senior (junior high) report card. Only one elementary/ junior report card stated its policy regarding discipline, homework, and attendance.

An example of an elementary report card evaluation statement was:

> Various aspects of student learning and development are evaluated throughout the year as well as at year end. The achievement scores indicate the extent to which the student is achieving the objectives of the program. The achievement ratings are based on a combination of such factors as tests, daily work, assignments and projects. The effort ratings indicates how well the student applies himself/herself. Student progress is reported according to specific rating scales as well as by comments.

Two (3%) report cards contained a statement regarding attendance, discipline, and homework. Both were from the same district, one at an elementary and one at a junior high level.

> Attendance: The Alberta School Act demands regular and punctual attendance of all students registered in schools. Account must be given for absences.
>
> Discipline: It is the granted authority of each school to exercise the same disciplinary measure as would be expected of a "wise and judicious parent."
>
> Homework: Homework is assigned with good reason. It is the duty of every parent to ensure that homework assignments are completed.

The three (4%) report cards which stated promotion policies were from junior high schools. Two report cards were from the same district. This district's policy was:

> To pass any subject, core or complementary, the mark be must 50% or higher average for the year. To pass the year's work, a student must have a 50% average in the six core subjects and a 50% in the complementary courses. Appeal of Final Marks is to be made according to the procedure outlined in the Parent/Student Handbook.

Parent signature requirement on Student Report Cards

Sixty-seven (84%) of the 80 report cards required the signature of either parent or guardian; however, 13 (16%) report cards did not. A number of these were computer report cards. The information on these cards was very scant compared to the non-computer cards. However, on these cards, at the time of printing an individual's marks, other information may also be inserted. There was no way to know if these additions happened. Of the 80 report cards not requiring signatures, 2 (3%) were elementary cards, 3 (4%) were junior high cards, and 8 (10%) were senior high report cards.

Attendance and Lates on Student Report Cards

The majority of the 80 report cards also gave an accounting of the attendance and lates for any given reporting period. Sixty-nine (86%) counted attendance and eleven (14%) report cards did not. Of the 80 report cards that did not count attendance, one (1%) was an elementary report card, two (3%) were junior high report cards, and eight (10%) were senior high report cards.

Key Words used in Student Evaluation

1. Effort

The term effort was part of many of the report cards.

Of the total number of 80 report cards in the study, 23 (29%) elementary report cards, 14 (18%) junior high report cards, and 5 (6%) senior high report cards measured effort. Thus 41 (51%) of the total (80) report cards appraised student effort.

Not all the report cards exercised the same form of evaluation. When evaluating effort for example, some made use of letters, numbers, and comments.

Table VI-6 FREQUENCY OF EVALUATION SYSTEMS REPORTING STUDENT EFFORT

Types of evaluation systems / Number and percentage	N=80	%
1. The use of letters	21	26%
2. The use of comments	12	15%
3. The use of numbers	9	11%
4. A statement concerning effort	6	8%
5. No effort evaluation	32	40%

Others utilized the following sets of codes:

E. VG. S. N.
S. I.
E. G. S. U.
C. S. U.
V. S. N.
E. S. I. N.
E. S. U.
S. N.

The above letters stand for:

S = satisfactory; VG = very good, G = good,
N = needs improvement, unsatisfactory, U.= unsatisfactory,
I = needs improvment, improving, C= commendable,
R = requiring more effort.

On report cards that measured effort by number, the number codes differed. Three report cards applied a scale of 1-3 tied to the following categories: works hard, works satisfactorily, and requires more effort; and commendable, works satisfactory, requires more effort. Another three used a scale of 1-4 meaning very good, satisfactory, inconsistent, unsatisfactory; consistently, frequently, occasionally, rarely; and commendable, works satisfactory, requires more effort, unsatisfactory effort. Another three report cards utilized a 1-5 scale signifying excellent, satisfactory, unsatisfactory, acceptable, needs improvement, unacceptable with 1 standing for consistently and 5 meaning rarely.

Comments could be either negative or positive. Examples of comments employed on the twelve report cards were:

Figure VI-7 EFFORT COMMENTS FROM REPORT CARDS

1. Practicing self control
2. Accepting responsibility
3. Attending to tasks
4. Shows real effort
* 5. Extra home study required
* 6. Fails to complete assignments on time
* 7. Assignments poorly done; incomplete assignments
* 8. Fails to come to class with adequate materials
* 9. Inattentive: shows little interest
* 10. Not trying hard enough
* 11. Not working to capacity
12. Is alert
13. Responsible and attentive
14. Active participate
* 15. Poor attendance
16. Outstanding effort; satisfactory effort
17. Effort in class is improving
* 18. Notes not completely satisfactorily
* 19. More home study required

* - represents negative comments

Ten (53%) of the nineteen comments were negative in nature. Six report cards made a policy statement concerning effort. An example of a report card policy statement was:

> Effort refers to the extent to which the student is trying to do well in all subject areas. In general, it is a measure of his attitude, and the degree to which he is accepting responsibility for completing assignments satisfactorily and effectively utilizing available resources and time.

2. Attitudes

Another frequently-used term employed on report cards was attitude. Of the total number of report cards (80), eight (10%) of the elementary report cards ranked attitude, seven (9%) junior high report cards measure attitude, and six (8%) senior high report cards rated attitude. In total, twenty-one (26%) of all report cards weighed the concept attitude.

As with "effort," how the report cards evaluated attitude differed. Six report cards employed a letter scale:

E. S. N. VG. G. N. E. S. I. N. U.
C. VG. S. N. ED.;

The above letters stand for:

E = excellent; S = satisfactory; V.G. = very good;
N = not satisfactory, not adequate, or needs improving
I = improving; U = unsatisfactory; C = commendable
Ed = encountering difficulities

One report card used a number rating of 1-4. Ten reports cards made comments relating to attitude. Two report cards each stated "attitude is improving," "responsible," and "attitude needs improving." The other report cards had the following comments: "has a good attitude," "poor attitude," "attitude could improve," "takes pride in work," "cooperative," "shows interest," "displays courtesy," "understands and obeys school rules," and "behaves in school."

Only one elementary report card had a statement concerning attitude:

> The effort, work habits, and attitude ratings indicated how well your child has applied himself/herself and are often related to the student's motivation for learning.

3. Social Awareness

A third aspect of the report card was social awareness. Of the total number of 80 report cards, 24 (30%) elementary report cards appraised social awareness, 1 (1%) junior high report cards measured social awareness, and no senior high utilized this concept. In total, 25 (31%) of all report cards ranked the concept of social awareness.

Of the 25 (31%) report cards with this social awareness aspect, not all employed the same title. Five report cards applied one the following terms: "social and/or emotional development," "personal and/or emotional development," and "social skills." Four report cards each used these terms: "social habits," and "personal development," and two report cards had "social awareness" and "social and personal growth."

Not all report cards utilized the same system of evaluation. For example, some made use of comments, numbers, and letters. The number and percentages of report cards operating with each of the forms is complied in Table VI-8.

Table VI-8 FREQUENCY OF EVALUATION SYSTEMS REPORTING SOCIAL AWARENESS

Types of evaluation systems / Number and percentage	N=80	%
1. The use of comments	33	41%
2. The use of letters	11	14%
3. The use of numbers	9	11%
4. The use of check marks	2	3%
5. Absence of social awareness	25	31%

The letter codes used on the 11 report cards are not all the same. They were:

S. I. E S. I. N E. S. N. C. VG. S.
N. ED. VG. G. ED. N. S. N

The above letters stand for:

E = excellent; S = satisfactory; V.G. = very good;
N = not satisfactory, not adequate, or needs improving
I = improving; U = unsatisfactory; C = commendable
Ed = encountering difficilities

The number codes on the nine report cards were also different: e.g. two report cards applied a scale of 1-5 with 1 standing for consistently and 5 meaning rarely, while with 1 standing for consistently and 5 meaning rarely, while another three also used the same scale of 1-5 but with following criteria: poor, fair, satisfactory, good, excellent. Four report cards employed a scale of 1-4 with 1 meaning consistently and 4 standing for rarely.

Some of these report cards fractionated the above headings further, while others implemented a comment code or teacher remarks section. This information is assembled in Table VI-9.

4. Work Habits

Work habits was a fourth evaluation criterion found on Alberta report cards. Of the total number of 80 report cards, 36 (45%) of the elementary report cards had a work habit component, 10 (13%) of the junior high report cards ranked work habits and 6 (8%) of the senior high report cards measured work habits. Thus 54 (68%) of the total report cards appraised work habits.

Once again not all report cards had the same form of evaluation. Report cards used comments, letters, numbers, and check marks. Some report cards used more than one type of work evaluation. This information is shown in Table VI-10.

Table VI-9 FREQUENCY OF REPORTING SOCIAL AWARENESS REMARKS

Social awareness comments Number and percentage	N=80	%
1. Respects property and rights	24	30%
2. Responsibility	19	24%
3. Participation	10	13%
4. Authority	9	11%
5. Self-control	9	11%
6. Courtesy	7	9%
7. Other report cards listed these comments as work habits comments.	7	9%
a. attending to tasks		
b. listens attentively		
c. completes assignments		
d. follows group directions		
e. works well with others		
8. Co-operation with others	6	8%
9. Independence	5	6%
10. Interaction with others	3	4%
11. Pride in work	3	4%
12. Other remarks	1	1%
a. shows a positive attitude toward learning		
b. shows sensitivity to others' feelings		
c. shows confidence in approaching activities		
d. demonstrates decision-making skills		
e. responds well to adult direction		
f. displays a sharing attitude		
g. accepts suggestions for improvement		
h. prompt		
i. shows self-respect		
j. relationships with others		
k. behavior in class		
l. cooperates in class		
m. practises self-discipline		
n. interaction with other students		
o. shows sufficient maturity		
p. unselfish attitude		

Table VI-10 FREQUENCY OF EVALUATION SYSTEMS REPORTING STUDENT WORK HABITS

Types of evaluation systems / Number and percentage	N=80	%
1. The use of comments	36	45%
2. The use of letters	28	35%
3. The use of numbers	11	14%
4. The use of a check mark	4	5%
5. Absence of work habit evaluation	26	33%

The letters codes used on the 28 report cards were not all the same. The following codes were used.

S. I. E.
C. S. U.
E. S. U
E. S. R.
VG. G. N.

E. VG. G. F. I
E. G. S. U.
E. ED. N
E. S. I. N.
S. I.

S. I. N.
E. S. N.
E. G. S. U.
C. VG. S. N. ED.

The above letters stand for:

S = satisfactory; VG = very good, G = good, F = fail,
N = adequate or not satisfactory, U.= unsatisfactory,
ED = encountering difficulties, I = improving
R = requiring more effort.

Eleven report cards exercised a number system when evaluating work habits. The scale of 1-4 was exercised by six report cards, while another five practiced the 1-5 scale. Thirty-six report cards used a comment code in their evaluation of work habits. This code was a numbered comment list which constituted the teacher's comments for a given report card. A teacher may assign a number rating or letter or the number of the comment to the report card.

Many report cards partitioned the heading work habits.

These subheadings and the comments from the comment codes are located in Table VI-11. Because the comments on the elementary reports differed from the other two levels, Table VI-11 will only represent the elementary comments.

Of the 42 elementary reports cards, 36 (86%) made use of work as part of the evaluation criteria. Work was appraised in four modes: 28 (66%) used comments, 20 (61%) utilized a letter rating, 11 (27%) employed a number scale, and four (9%) employed a check mark.

The two number scales were 1-4 and 1-5. The comment code consisted of a number of comments often related to effort, attitudes, social awareness, and work. The teacher simply wrote the number of the comment in the appropriate place on the report card or used a number scale or letter rating on the report card.

If the twenty junior report cards, ten (50%) used either numbers or letters while 10 (50%) used work habits comments. The comments from the various report cards are listed in Table VI-12.

So, the task of elementary school could be seen as shaping students into workers. The junior high definition of work was not as elaborate as the elementary definition. It consists of working independently, using time effectively, working to capacity, and working in groups.

Table VI-11 FREQUENCY OF ELEMENTARY WORK HABITS COMMENTS

Work habit comments / Number and percentage	N=170	%
1. works independently	27	16%
2. follows directions	23	14%
3. is attentive	22	13%
4. completes tasks	18	11%
5. does neat and careful work	17	10%
6. uses time effectively	9	5%
7. begins work promptly	8	5%
8. works well in groups	5	3%
9. makes an effort to correct errors	4	2%
10. takes pride in work	4	2%
11. other comments:	3	2%
a. demonstrates good self-discipline		
b. completes assignments on time		
12. other remarks:	2	1%
a. works to capacity		
b. concentrates on work		
c. assumes responsibility		
d. does excellent work		
e. displays effective work habits		
f. not working to potential *		
g. assignments not always complete *		
h. completes required corrections		
13. other comments:	1	1%
a. organized		
b. shows initiative		
c. is inquisitive, inventive, self-motivated		
d. neat and well organized		
e. completes work satisfactory		
f. completes homework satisfactory		
g. ability to follow class room routine		
h. work consistently		
i. works quietly without disturbing others		
j. finds tasks when work is completed		

* = negative comments

Table VI-12 FREQUENCY OF JUNIOR HIGH WORK HABITS COMMENTS

Number and percentage Work habit comments	N=42	%
1. works well independently	4	10%
2. work and achievement satisfactory #	4	10%
3. used time effectively	3	7%
4. work improving	3	7%
5. not working to capacity *	3	7%
6. assignments not always completed *	3	7%
7. does excellent work	2	5%
8. displays effective work habits	2	5%
9. works well in groups	2	5%
10. other comments	1	2%
a. work habits improving		
b. follows directions		
c. completes work		
e. organized		
f. listens attentively		
g. proofreads work for accuracy		
h. above average work		
i. average work #		
j. working below ability *		
k. careless work habits *		
l. homework not always finished *		
m. assignment poorly done *		
n. all assignments not handed in *		
o. below average work *		
p. needs to use time efficiently *		
q. work habits need to improve *		

= neutral comments, * = negative comments

Of the 18 senior high report cards I analyzed, 6 (33%) had work habit comments. The senior high reports did not use letters or numbers as did the elementary and junior high reports cards. The comments from the various senior high report cards are listed in Table VI-13.

Table VI-13 FREQUENCY OF SENIOR HIGH WORK HABITS COMMENTS

Work habit comments / Number and percentage		N=22	%
1. satisfactory work	#	5	23%
2. does excellent work		3	14%
3. assignments not always completed	*	3	14%
4. not working to potential	*	3	14%
5. good work		2	9%
6. work improving		2	9%
7. other remarks:		1	5%
a. works well individually			
b. works well in groups			
c. poor work habits	*		
d. above average work	#		

= neutral comments, * = negative comments

It was difficult to define "work" in the senior high school from the above comments. Most of the comments simply used the word "work." The percentage of types of comments differs among the three levels of report card comments. The following table VI-14 indicates the percentage differences among the three levels of report cards.

Table VI-14 FREQUENCY OF POSITIVE, NEGATIVE, AND
NEUTRAL WORK HABIT COMMENTS ON REPORT CARDS

Type of comments	Positive		Negative		Neutral	
Number of comments	N = 199		N =	25	N = 11	
Levels of schools / Number and percentage	N	%	N	%	N	%
1. elementary	166	83%	4	16%		
2. junior high	23	12%	14	56%	5	45%
3. senior high	10	5%	7	28%	6	55%
4 total						

Part two: Body of the Student Report Card

Rank Order of Subjects

Most report cards, except those which left a space to be written on, listed the subjects taught in a particular district or school. In listing subjects, I assumed one of two things happened. Subjects were listed alphabetically, or in order of perceived importance. Since they were not listed alphabetically, in my study, I have assumed that they are listed in order of the perceived importance by the author(s) of the report cards. Based on this assumption the following Table VI-15 illustrates five of the subjects taught in elementary school and their rank order of placement on 40 report cards of the 42 report cards. The other two report cards did not list the subjects.

Table VI-15 FREQUENCY OF SUBJECTS LISTED ON REPORT CARDS GIVING A RANK ORDER IN ELEMENTARY SCHOOL

Rank order of report card	1		2		3		4		5		Total number of times found on report cards
Number and percentage	N	%	N	%	N	%	N	%	N	%	
Rank order of subjects on report cards											
1. L. A.	30	77%	9	23%							39
2. MATH			24	60%	11	28%	4	10%			40
3. S.S.			1	3%	13	33%	16	41%	5	13%	39
4. SCIENCE			0	0%	7	18%	15	38%	11	28%	39
5. PHY. ED.					1	3%			1	3%	38

Legend: L.A.- Language Arts; Math - Mathematics;
S.S.- Social Studies; Phy. Ed.- Physical Education

Other subjects listed in elementary school were: Health, Art, Music, French, Religion, Drama, Writing/ Printing, Reading, Computer Literacy, Social Science, Spelling, Band, and Writing. Assuming that order correlates with importance, order of importance of the subjects were: Language Arts, Mathematics, Social Studies, Science, Physical Education.

Table VI-16 exemplifies five of the subjects taught in junior high school and their rank order of placement on 17 report cards of the 20 report cards. Three junior high report cards did not list any of the subjects.

Table VI-16 FREQUENCY OF SUBJECTS LISTED ON REPORT CARDS GIVING A RANK ORDER IN JUNIOR HIGH SCHOOL

Rank order on report card	1		2		3		4		5		Total number of times found on report cards
Number and percentage	N	%	N	%	N	%	N	%	N	%	
Rank order of subects on report cards											
1. L.A.	9	53%	4	24%			3	18%	1	6%	17
2. MATH	3	18%	7	41%	3	18%	4	24%			17
3. S.S.			3	19%	5	31%	5	31%	1	6%	16
4. SCIENCE			3	19%	4	25%	3	19%	3	19%	16
5. PHY ED.					1	6%			8	50%	16

Legend: L.A.- Language Arts; Math - Mathematics;
S.S.- Social Studies; Phy. Ed.- Physical Education

Other subjects taught in junior high were: Health, French, Religion, Drama, Art, Micro Computers, Home Economics, Industrial Arts, Academic Challenge, and Spelling. The order of importance of subjects in junior high were: Language Arts, Mathematics, Social Studies, and Physical Education. Social Studies ranked both third and fourth place. Science does not hold a ranking order in the junior high report card.

The senior high school report cards did not list subjects. These student report cards are computer printed and the subjects are listed at the time of printing.

Language Arts

Language Arts was listed first on 30 (71%) of the 42 elementary report cards, nine times (21%) as second, and not listed on three (7%) report cards. In elementary school, Language Arts was often subdivided into six parts and sometimes re-subdivided further into more parts. If the metaphor of an outline is applied to Language Arts, the major concept is Language Arts and there are six minor concepts: written expression, reading, speaking, listening, spelling, and printing/writing.

One elementary report card had a different set of Language Arts concepts for the first three reporting periods. Each of these reporting periods was counted as a separate card. Therefore, when analyzing Language Arts it was assumed there are 44 report cards.

Of the 44 report cards, 32 (73%) divided Language Arts into six minor concepts. Below are six tables which list the smaller minor concepts evaluated on report cards. They are:

Table VI-17	Frequency of evaluating "Written Expression" concepts in Language Arts
Table VI-18	Frequency of evaluating "Reading" concepts in Language Arts
Table VI-19	Frequency of evaluating "Speaking" concepts in Language Arts
Table VI-20	Frequency of evaluating "Listening" concepts in Language Arts
Table VI-21	Frequency of evaluating "Spelling" concepts in Language Arts

Table VI-22 Frequency of evaluating "Printing/Writing" concepts in Language Arts

To summarize Language Arts in elementary school, 76% of student report cards subdivided the subject into six minor concepts of: (1) written expression, (2) reading, (3) speaking, (4) listening, (5) spelling, and (6) printing/writing. Each of these concepts had other smaller concepts. Together the six minor concepts and their smaller concepts formed a picture of how elementary schools in Alberta perceives Language Arts.

Of the 20 junior high report cards, 9 (45%) listed Language Arts as first on the report cards, 4 (20%) as second, 3 (15%) as fourth, 1 (5%) as fifth, and 3 (15%) did not list Language Arts. Given its preeminence on the report card, Language Arts ranked first in importance in both elementary and junior high.

The junior high report cards perceived Language Arts very differently from the elementary. Of the twenty junior high report cards, only two (10%) divided Language Arts into minor concepts. One report card employed the following ideas: participates in group activities, assignments completed, works well independently, and participates in class discussion. The other report card listed: literature, written composition, reading, grammar, and oral expression. Of the two junior high report cards, only the second relates to similar heading in elementary. The first set of criteria related to the elementary "work habit" section of the report card.

Table VI-17 FREQUENCY OF EVALUATING "WRITTEN EXPRESSION" CONCEPTS IN LANGUAGE ARTS

Written Expression concepts / Number and percentage	N=44	%
1. Uses language skills (punctuation capitalization etc.)	12	27%
2. Expresses ideas clearly	9	20%
3. Demonstrates Creativity	9	20%
4. Prints/writes legibly in daily work	8	18%
5. Spells correctly in daily work	7	16%
6. Applies knowledge of correct spelling	3	7%
7. Written expression	2	5%
8. Writing: informal and formal	2	5%
9. Is beginning to write our ideas and experiences in original sentences	1	2%
10. Can read his/her own written work	1	2%
11. Composition	1	2%
12. Developing skills of outlining and organizing reports	1	2%
13. Proofreading written work	1	2%
14. Completes assignments	1	2%
15. Writes with organization and clarity	1	2%
16. Spelling lists	1	2%
17. Listening	1	2%
18. Report cards only listing concept	6	14%
19. Report cards- no listing of concept	19	43%

Table VI-18 FREQUENCY OF EVALUATING "READING" CONCEPTS IN LANGUAGE ARTS

Reading concepts / Number and percentage	N=44	%
1. Reads with comprehension	22	50%
2. Word attack (uses various methods to identify new words)	14	32%
3. Knows a sight vocabulary	12	27%
4. Reads well orally	11	25%
5. Reads fluently with expression	10	23%
6. Shows an interest in reading	9	20%
7. Vocabulary development	5	11%
8. Reads independently	4	9%
9. Sound recognition (Phonics)	3	7%
10. Library skills	2	5%
11. Knows the correct sound-symbol of relationships of the consonants	2	5%
12. Uses information from reading to extend learning	2	5%
13. Can read his/her own written work	1	2%
14. Is developing thinking skills in relation to reading	1	2%
15. Understands main idea and related details	1	2%
16. Identifies the main idea of a story	1	2%
17. Reads critically- makes inferences predictions, draws conclusions	1	2%
18. Report cards- lists only the concept	8	18%
19. Report cards- no listing of concept	12	27%

Table VI-19 FREQUENCY OF EVALUATING "SPEAKING" CONCEPTS IN LANGUAGE ARTS

Speaking concepts / Number and percentage	N=44	%
1. Speaks clearly	8	18%
2. Uses appropriate vocabulary	5	11%
3. Communicates ideas effectively	5	11%
4. Articulates speech sounds correctly	2	5%
5. Good use of language skills in class discussion	2	5%
6. Uses complete sentences	2	5%
7. Follows oral directions	2	5%
8. Expresses ideas clearly	2	5%
9. Participates in discussion	1	2%
10. Expresses meaningful ideas in small groups	1	2%
11. Expresses meaningful ideas in large groups	1	2%
12. Report cards only listing concept	12	27%
13. Report cards- no listing of concept	20	45%

Table VI-20 FREQUENCY OF EVALUATING "LISTENING" CONCEPTS IN LANGUAGE ARTS

Listening concepts / Number and percentage	N=44	%
1. Follows oral directions	8	18%
2. Listens attentively to stories and poems	6	14%
3. Understands and recalls what is read and heard	4	9%
4. Listens and responds with understanding	3	7%
5. Listens and views attentively	3	7%
6. Recalls and predicts from what is heard	1	2%
7. Listens to others	1	2%
8. Listens critically- makes inferences, predications, and draws conclusions	1	2%
9. Report cards only listing concepts	13	44%
10. Report cards- no concept listing	20	45%

Table VI-21 FREQUENCY OF EVALUATING "SPELLING" CONCEPTS IN LANGUAGE ARTS

Spelling concepts / Number and percentage	N=44	%
1. Lists	10	23%
2. Application: applies skills to other subjects	9	20%
3. Spelling informal	1	2%
4. Spelling formal	1	2%
5. Report cards only listing concept	24	54%
6. Report cards- not listing concept	8	18%

Table VI-22 FREQUENCY OF EVALUATING "PRINTING/ WRITING" CONCEPTS IN LANGUAGE ARTS

Printing/ Writing concept / Number and percentage	N=44	%
1. Forms printed letters correctly	5	11%
2. Prints/writes legibly in daily work	5	11%
3. Report cards only listing concept	24	54%
4. Report cards- not listing concept	8	18%

Mathematics

Mathematics was listed second on 24 (57%) of the 42 elementary report cards, 11 times (26%) as third, 4 (10%) times as fourth on the elementary report cards, and two (5%) report cards that did not list mathematics. In elementary school, Mathematics was split into eleven more concepts. One elementary report card had a different set of concepts for each of the first three reporting periods. Therefore, when analyzing Mathematics it was assumed there were 44 report cards.

Mathematics had eleven concepts. These are summarized in Table VI-23 below.

Table VI-23 FREQUENCY IN EVALUATING "MATHEMATICAL" CONCEPTS IN MATHEMATICS

Mathematics concepts \ Number and percentage	N=44	%
1. Problem solving	17	39%
2. Concepts	14	32%
3. Knowledge of Facts	10	23%
4. Computation skills	9	20%
5. Geometry and Graphing skills	7	16%
6. Numeration	6	14%
7. Operations	6	14%
8. Measurement skills	6	14%
9. Knowledge of number facts	2	5%
10. Accuracy	2	5%
11. Comprehension	1	2%
12. No specific concept mentioned	20	45%

The three most common concepts printed on elementary report cards were: problem solving, concepts, and knowledge of facts. For this table, I have placed the following terms from various report cards under the term "concept," understanding concepts, concept development, knowledge/concepts, and concept and skills. I have assumed that these individual terms can be placed under the umbrella of "concepts." I have also assumed that the two terms "knowledge of facts" and "knowledge of number facts" are different.

Of the 20 junior high report cards, 3 (15%) listed Mathematics first on the report cards, 7 (35%) as second, 3 (15%) as third, 4 (20%) as fourth, and 3 (15%) did not list Mathematics. In relation to the other subjects, Mathematics ranked second to Language Arts in importance. None of the report cards subdivided the subject any further.

Social Studies

The third most important subject of the 42 elementary report cards was Social Studies. One (2%) report card listed it second, 13 (31%) ranked it third, and 16 (38%) appraised it fifth. In total, 39 (93%) report cards evaluated Social Studies in elementary school.

Of the 42 report cards, 24 (57%) employed only the term "Social Studies," while 15 (36%) partitioned the term further. There did not seem to be a pattern for the terms. The 15 report cards used a number the following items: participation, effort, attitude, interest, written work, understanding and facts, completes reports and projects, and achievement. One report card listed these: participates in activities, locates information and makes reports, demonstrates a knowledge of facts, demonstrates an understanding of concepts, and is learning to make judgments.

The twenty junior high report cards also ranked Social Studies in both third and fourth place. Three (15%) report cards rated it second, 5 (25%) each for third and forth place, 1 (5%) each for fifth and seventh place, and 4 (20%) did not list the subject.

One report card segmented Social Studies into the following components: demonstrates an understanding of facts and concepts, demonstrates managerial skills, demonstrates problem solving skills, and demonstrates performance skills. The rest of the report cards listed the subject only. None of the senior report cards listed subjects because they are computer report cards and they are basically left blank.

Science

Science is ranked fifth in importance in elementary report cards. Seven report cards rank it (17%) third in the list of subjects, 11 (26%) in fifth, and 3 (7%) in sixth place. Three (7%) report cards did not list Science as a subject. Of the 42 elementary report cards evaluating Science, 11 (26%) sorted the subject into its elements, 12

(29%) measured Science using the criteria of achievement and effort, 15 (36%) evaluated Science utilizing the term "effort," 1 (2%) had space for comments only, and 3 (7%) did not list the subject.

The elements applied to Science were: demonstrates an understanding of facts and concept; uses investigative skills; participates in activities and discussions; knowledge and concepts skills; demonstrates an understanding of skills taught; observes, investigates, makes discoveries; completes reports and projects; interests and attitude; and written work.

On the junior high report cards, it was cited 3 (15%) times in second place, 4 (20%) in third position, 3 (15%) in both fourth and fifth standing, and 16 (80%) did not list the subject. One (5%) report card employed the following two parts phrases: demonstrates an understanding of facts and concepts and uses investigative skills. Fifteen (75%) simply entered the subject on the report card. Senior high report cards did not list subjects.

Physical Education

At the elementary level, Physical Education was listed in sixth place. Twelve (29%) report cards listed it in sixth order, 7 (17%) in seventh place, and 10 (24%) in eighth position. Four (10%) did not mention Physical Education. One (2%) report card measured Physical Education using the following guidelines: demonstrates an understanding of facts and concept, demonstrates appropriate level of skill development, demonstrates an appropriate level of physical fitness, work habits, effort, and attitude. The other report cards entered the subject only.

French

Twenty-two elementary (52%) report cards listed French as one of the subjects to be evaluated. Of the 42 report cards, 10 (24%) divided French into various sub-categories while the other report cards only listed the subject. Three report cards from the same district employed the same minor concepts and detail as Language Arts. The minor concepts were: listening, speaking, printing/writing, written expression, reading, and spelling. One of the report cards did not list English Language Arts at all, but only evaluated French Language Arts.

The following evaluation statements were on one report card: understands what is heard, pronounces words correctly, responds well to oral cues, understands what she/he reads, makes appropriate grammatical additions and substitutions in sentences, and express ideas in written work. Another employed the following criteria for evaluation: knowledge/concepts/skills and participation. Others utilized other standards: listening, speaking, reading, writing; oral and comprehension; comprehension.

And others employed statements like: speaks with correct intonation and accuracy, written work, listen attentively to poems and stories, follows oral directions, speaks clearly, pronounces words correctly, uses complete sentences properly, spells word lists, applies to other subjects.

Of the twenty junior report cards, only 7 (35%) registered French as a subject. None offered any other criteria for evaluation.

Other Subjects

Art was evaluated in 39 (93%) of the 42 elementary report cards. Four evaluated Art based on achievement and attitude as criteria. Three used the two evaluative statements: participates and completes projects. Two used only two comments: achievement and comment. Other statements were: demonstrates an understanding of facts and concepts, is developing skill in expressing ideas through art media, is developing an appreciation of art; attitude and participation; creativity and skill development and attitude; and creativity, skill development, and completes projects.

One junior high report card mentioned Art as a subject. Its criteria for evaluation were: demonstrates an understanding of facts and concept, is developing skill in expressing ideas through art media, and is developing the ability to take and make judgements about art.

Thirty-eight (90%) of the elementary report cards listed

Music. Four (10%) report cards did not appraise Music. Three (7%) report cards employed these statements: participates in activities and effort. Another three utilized these criteria: skill development, attitude, participation, and interest. Others made use of the phrases: demonstrates an understanding of facts and concepts, is developing reading and listening skills, is developing performance skills, and skills.

Health was another elementary subject evaluated. Thirty-five (83%) report cards graded it. Three used the following features: demonstrates an understanding of facts and concepts; demonstrates an understanding of concept taught and participates in discussions and activities; and knowledge of facts. Twelve junior high report cards recorded a Health grade.

Of the 24 Roman Catholic School System elementary report cards, 19 (79%) evaluated Religion. The others listed the subject for comment, but did not measure it. Seven placed Religion first on their report cards. There were six Roman Catholic School System junior high report cards; three mentioned Religion in first place. None offered any appraisal details.

Elementary subjects not mentioned thus far were: Drama, Computer Literacy, Band, and Social Sciences. On several report cards Reading, Spelling, Printing/Writing were recorded as separate subjects, not part of Language Arts. It was impossible to tell what Social Sciences were, since it is not part of the Albert Curriculum.

Other subjects offered in junior high were: Microcomputers, Industrial Arts, Home Economics, Guidance, Typing, Fitness, Environmental Studies, and Band. None of these had any details as to how they were evaluated.

Summary

This chapter has analyzed the data collected from the 80 Alberta reports cards. This analysis has involved twenty-three tables and commentary. The elementary definition of work habits is as follows: works independently, follows directions, is attentive, and does neat and careful work. Work habits in junior high means: works well independently, work and achievement is satisfactory, uses time effectively, works to capacity, and completes assignments. Senior high school defines work habits as the following: satisfactory work, does excellent work completes assignment, and works to potential. The elementary schools is more specific in its definition, while the junior and senior high schools are more general.

The same statement can be made about the elementary report card regarding the individual subjects, especially Language Arts. The elementary report card segments Language Arts into six major concepts and many details. The other subjects in elementary schools are not segmented into as many parts. But the junior high and senior high report cards do not segment any of the subjects, other than a few junior high report cards dividing the subjects into two parts of achievement and effort.

It would at first appear the elementary report cards give more information to parents than the junior high and senior high report cards. This information declines substantially from elementary to junior high to senior high. Further comments will made in the next chapter. The next chapter involves the synthesis and evaluation of this information.

CHAPTER 7

REFLECTIONS ON STUDENT REPORT CARDS

In the last chapter, eighty student report cards were analyzed from a number of perspectives. The next three chapters suggest what report cards tell us about school, education, and our society. The assumptions that guide this chapter are that student report cards mirror our schools, the school mirrors our culture, and our culture mirrors how we preceive and understand our world and our experiences in our world.

As I examined and reflected upon the eighty report cards as described in the last chapter, eight concepts dominating them emerged. These concepts are (1) work, (2) time, (3) socialization, (4) segmentation of knowledge, (5) sequential knowledge and learning, (6) standardization, (7) evaluation and judgments, (8) useful and nonuseful information. Each of these eight concepts will be discussed in this chapter.

Work and Time

Based on the information in Table VI-11, work at a elementary level can be defined specifically as working independently, following directions, attentiveness, completing tasks, and neat and careful work. Other important elements of work include using time effectively, beginning work promptly, working well in groups, making an effort to correct errors, taking pride in work, and demonstrating good self-discipline.

Not all report cards use the same work vocabulary. Six applied the term _work skills_. The _Collins English Dictionary_ defines the word "skills" as "a special ability in a task, especially an ability acquired by training or a special training or manual proficiency." The use of the term "work skills" implies that students are being _trained_ in school in their work skills.

Another seventeen report cards use the term _work habits_. The same dictionary defines _habits_ as "a learned behavior response that has become associated with a particular situation especially one frequently repeated." This definition is psychological, and report cards which use the term _habits_ might be presuming evaluation is based on how often the student repeats a particular set of predecided work criteria. There are, therefore, specific behaviors that are good to repeat habitually. A person does these things, these habits, without thinking. Three report cards utilized the term "work and study habits" while another three employed the term "work study skills." The similarities of terms suggest that work and study are similar habits or skills, or are at least compatible. If one is studying, then one is also working. Therefore, school is work.

Based on the above information in Table VI-12, work at a junior high level could be defined as working independently and using time effectively. The comments from the various senior high report cards simply use the word work. The parsimony makes it very difficult to define the term, however the lack of need to define assumes that everyone involved, by this time, knows exactly what work is. Hence there is no need to define the concept.

These differences between the junior and senior high and the elementary school may reflect how junior and senior high administration perceive their students in comparison to how the elementary school understand their students. The difference suggests a different vision of school life: elementary teachers may see themselves as an initial agent of socialization, while junior high and senior high teachers do not. One could hypothesize, for example, that the greater attention to work in the elementary school reflects the conscious task of the school. The job of the elementary school is to teach students how to work as part of the socialization process.

There may be other explanations for this phenomenon. Does the different emphasis placed on work indicate the importance of evaluation of work held by the elementary school in comparison to the junior and senior high? Do elementary report cards assume "work skills" or "work habits" are more important than the junior high or senior high report cards? Is it assumed by junior and senior high report cards that students have attained work skills or work habits in elementary school? When students enters junior high or senior high, if they do not have these work habits or work skills, are they considered untrained or without proper habits?

Schools and report cards view time as part of the concept of work. Linking time and work in society is not surprising. Work habits, comments (Table VI-11) from the 42 elementary report cards, contained the following criteria for work:

43%- completes tasks [in the time allotted]
21%- uses time effectively
19%- begins work promptly
7%- completes assignments on time
7%- assignment not always complete
5%- assignments not always completed [in the time allotted]

The brackets in the above comments are author comments. That each of the comments is related to time and work suggests that one major job of the school is to teach students to work quickly, to work efficiently, and to complete products. School and industry seem very close in their goals.

Of the 20 junior report cards, the following work habit comments are related to work and time:

15%- used time effectively
15%- assignments not always completed
5%- completes work [in the time allotted]
5%- homework not always finished [in the time allotted]
5%- all assignments not handed in [in the time allotted]
5%- needs to use time efficiently

Of the 18 senior high report cards, only the following work habit comment is related to work and time: 17%- assignments not always completed [in the time allotted].

One has only to spend a few days in any school in North America to understand that time is an important concept. Not only is time an integral part of the evaluation portion of the report card; but, of the 80 report cards, 69 (86%) also report attendance and lates (Do students show up for work?). This figure may be even higher because a number of the remaining eleven report cards were computer report cards. These report cards contain little information, and it is impossible to know what information was printed on them at the time of reporting.

Socialization

Socialization of students is a dominate concept in the report cards. While not specifically listed as a concept, I came to see terms like social awareness, work habits/skills, and attitudes as parts of the socialization process. Children in North America leave their home environment early in their childhood, long before the socialization process is completed. They spend more time at school than they often do at home. But, when children attend school the schools and parents together become responsible for the continuation of this process. This explains the concept of in loco parentis.

Effort is a part of the socialization process evaluated on report cards. More junior high report cards had comments or a rating of effort than the elementary and senior high report cards. Almost 50% of all report cards rated effort. The most common rating scale was the use of letters: excellent, satisfactory, improving, and not satisfactory. [Of the twenty comments on Table VI-7, ten (50%) were negative in tone.]

The fact that effort can be satisfactory or unsatisfactory implies two kinds of effort - a good kind and a bad kind. The ability to have effort divorced from success implied that more than quantity was important. Some examples of negative comments included extra home study required, fails to complete assignments on time, fails to come to class with adequate material, not trying hard enough, and not working to capacity.

These comments together appear to suggest that the philosophy of effort was that students should accept responsibility. They should do class work, homework, and assignments. They should carry enough paper, pens, and pencils. Or they should appear to be trying and working to capacity. The use of the metaphor capacity suggests that

5

the student is a vessel to be filled and that knowledge is substantial, having volume, and can be poured like a liquid. These report card comments are consistent with the philosophy of effort as indicated on other report cards where reference is made to how well students have applied themselves, their attitudes, their acceptance of responsibilities, and their work habits.

Another part of the socialization process evaluated on report cards was the general heading social awareness. This social awareness section of the report cards was highly developed, but the same term was not used on all report cards. For example, some report cards employed social and/or emotional development, others utilized personal and/or emotional growth, and still others used social skills or habits. Of the 25 report cards that rated social awareness, 5 employed the term social and or emotional development, 5 utilized personal and/or emotional growth, 5 had the term social skills, 4 used social habits, 4 employed personal development, 1 utilized social awareness, and another 1 used social and or personal growth.

What do these terms mean? Are they synonyms? The words habit and skill have already been defined using Collins English Dictionary. The same dictionary defines development as "the act or process of growing, progress, or development." Develop is defined as, "to come or bring to a later or more advanced stage or expanded stage, to grow or cause to grow gradually."

As already indicated, skills are taught by repetition. Habits can also be taught because they are learned. But development is different. Development is an act of growing and developing. It can not be taught or learned, only grown into. It is a part of maturation of each child and the socialization process of that child. Yet report cards place the concept on a scale to be evaluated. I was struck by the question: "How can we justify evaluating a phenomenon that the student cannot control?" Can a baby be judged normal or not normal, using the criteria that the baby talks at age one or age two? Here, the major functions of schools to socialize children and to evaluate students seems to conflict. Social awareness, a phenomena, seems hard to evaluate.

The first priority of social awareness (Table VI-9) is respects property and rights. Thirty percent of the report cards employed respects property and rights. This comment is very interesting because of its tie to Canadian law. The Canadian court system appears to punish the disrespect of property heavier than crimes against the person.

Responsibility is the second most important concept of social awareness, participation is the third, while authority and self-control are rated in fourth place, and courtesy ranks fifth. All these terms can be considered very important in the socialization of children within our culture. (My assumption is that authority means respecting authority.)

Some report cards treat the terms work habits, effort, attitude, and social awareness as separate concepts to be evaluated; however, others list all of these concepts with a single title of work habits, effort, attitudes, or social awareness. Others employ the title of social skills/work habits, or social attitude Several report cards utilized the innocuous title of comment code. These report cards made no attempt to differentiate among them. The ideas overlap with each other.

Segmentation of knowledge

Report cards, among other things, indicate to those who use them that knowledge is segmented. This may seem like a practical point only; but, the study of the life of a metaphor suggests how seductive these choices can be. Many report cards separate work habits from attitude and effort. These concepts, it would seem, overlap each other. For example, the following comments were found on both the Work Habit Comment Tables (VI-11-13) and the Effort Comment Table (VI-6): assignments poorly done, incomplete assignments, not working or working to capacity, assumes or accepts responsibility, active participant or works well in groups, and not working to potential or not working to capacity.

All report cards in the sample divided knowledge into segments relating to subjects. All but two list subjects individually. Two have sheets of paper without any subjects listed for the teacher to appraise their students. These teachers may list the subjects and then comment or they may holistically evaluate their students.

The other report cards not only list the subjects, many divialso de subjects into further segments of information. This division is especially true in elementary school, where Language Arts is often partitioned into many parts. Seventy-three percent of the elementary report cards separated Language Arts into the further portions: written expression, reading, speaking, listening spelling, and printing/writing. These parts are then often cut into seven smaller parts, as demonstrated previously in Tables VI-17-22. Other subjects are not as segmented as Language Arts, but they are often split into two major headings of achievement and effort.

Report cards usually have four major divisions: a section which contains a superintendent's message and reporting information; a section evaluating work habit, attitude, and effort; the evaluation of the subjects themselves; and, last, the promotion page or section.

One assumption that users of report cards make is that each student will be promoted from one grade to the next. The student will not advance two grade levels in one year.

Schools and report cards assume students will pass into each grade sequentially.

Learning and knowledge are sequential

Student report cards suggest that learning is sequential. One report card for grade one indicated the importance of sequence with a different set of evaluation criteria for each of three reporting periods for both Language Arts and Mathematics. The criteria outline the sequence. In Language Arts, for the first reporting period, students were evaluated on following criteria:

- -listen attentively
- -follows oral directions
- -expresses ideas clearly
- -articulates speech sounds correctly
- -makes good use of language skills in class discussion
- -is familiar with the basic sight vocabulary
- -understands and recalls what is read
- -shows an interest in and enjoys books
- -forms printed letters correctly

In the second reporting period, the following concepts were added

- -is beginning to write own ideas and experiences in original sentences
- -is learning and using new words
- -can read his/her own written work
- -is developing the strategies necessary for reading unfamiliar material
- -is developing thinking skills in relation to reading comprehension (predicting, verifying, questioning, discussing)

And, in the third reporting period, Language Arts was divided into five headings: reading, written expression, printing, listening, and speaking. Each heading had a number of details .

Standardization

Standardization can also be observed in the report cards. Assuming that order denotes importance, the core or academic subjects are viewed as the most important subjects by 92% of all the elementary and junior high report cards. Language Arts was placed first by 90% of the elementary and junior high report cards. Ninety-two percent placed Social Studies in second place. Science and Physical Education were third and fourth respectively.

Language Arts was partitioned into parts by 73% of the elementary report cards. Not all six divisions are indicated on every report card, but parts of the six were employed. Many report cards subdivided the six major parts further. These subdivisions were standard throughout the report cards.

Sixty percent of all 80 report cards evaluated work habits. Of the 62 elementary and junior report cards, 50% rated "works well independently" as the most primary work habit skill. It was assumed that rank denotes both importance for evaluation and, at the same time, a list of acceptable behavior expected from students and strived for. If not, it would seem silly to list these "skills." Therefore, the listing and the order of listing of particular attitudes, efforts, work habits, and general comments in various sections of the report card shows what behaviors are important in schools. These behaviors seem standardized throughout the report cards.

There was also a standardization of marks throughout the report cards and within each district. Eighty-one percent of the districts employed letter grades. The letters used were standardized: A, B, C, D, and F. Of the twenty-one districts, 71% also utilized percentage in conjunction with the letter grades. Once again the percentage range for each letter were often the same. For example, the percentage range for "A" was 80-100%; 65-79% for "B;" 50-64% for "C;" and 40-49% for "D." Some elementary report cards operated with letter grades and words to indicate the meaning of the letter grades. For example, an "A" was excellent, "B" was above average or very good, "C" was average, "D" was below average, and "F" was failure.

Fifty-seven percent of the districts used number ratings in their evaluations. These numbers ranged from 1-3 or 1-5. Seventy-six percent of the districts employed letter ratings. The letters often differed, but most districts used a range of three letters, four letters, or five letters.

The most common type of evaluation for reporting effort was the use of letters. Of the 42 report cards evaluating effort, 50% used letters. Sixty percent of the 55 report cards appraising social awareness employed a list of comments. Report cards (54) which evaluated work habits utilized two types of evaluation: 67% made use of a list of comments and 52% applied a series of letters.

The number of report cards per year is also standardized. Forty-seven percent of all report cards had four reporting periods and 22% had three reporting periods per year. There is standard number of student report cards per year throughout the 80 districts.

Evaluation and Judgment: Assumed Public Knowledge

The entire report card is an experience in evaluation and judgments. This comment almost seems banal, but certainly it is an important note. Every aspect of a student is placed on a mechanical scale and given a mark on that scale. A scale may be "a machine used to measure physical things ... a sequence of marks either at regular intervals or else representing equal steps used as a reference in making measurements ... an established measure or standard...a progressive or graduated table of value, size etc." (Collins English Dictionary).

The report card is simply an accounting, summing up, and comparing of a student for themselves and their parents. Students are measured for their behavior, work habits, attitudes, effort, socialization development, attendance and lates, skills and knowledge of factual matter. The scales vary in appearance, but they are still viewed by North American as physical scales, a sequence of marks at regular intervals.

Scale is often defined very precisely. For example, 50% is a pass while 49% is a failure; or, whole numbers (1-5) are utilized and three is the dividing mark between pass or failure. Only two major elements exist in the scale - pass or failure. The scale allows for how well a student passed or how poor a student failed. There are no other alteratives.

Sometimes the scale is loosely defined with a series of words: excellent, very good, satisfactory, not satisfactory or commendable, satisfactory, unsatisfactory. Often the scale is not defined at all. For instance, understandings like needs improvement, not working hard enough, poor attitude, practicing self control, shows real effort are offered without comment.

It is assumed that parents and students know what scale is used or how much is needed to reach the dividing mark for pass or failure. If the comment is negative, it is assumed that one knows (or can find out) how much (a quantity) is needed to attain a positive comment. In fact, students often ask teachers how "much" work they have to do to get a grade. While this may frustrate teachers, it shows a clear knowledge of the system. If the comment is positive , students ask how far they might slide backwards to "get" a negative comment on their report cards. (Students also seem to implicitly know/ believe that the control of the grades is not theirs alone.)

These assumed understandings extend past the terms and concepts. Of the 80 report cards, only 24% stated the school's or district's student progress policy in a report card. And only 18% of the report cards stated their policy concerning evaluation. Three percent of the report cards contained a statement regarding attendance, discipline, and homework. In other words, seventy-six percent of the students and parents may not have a formal statement describing how evaluation will be carried out by the school. Only 7% of the report cards stated the meaning of the term effort.

The term work is defined in the report card by the list of criteria used to evaluate. However, all the report cards gave a brief accounting of the rating systems used on the cards: the letter grades and their assigned percentage range or the letter ratings and their meaning. Students and parents are given very little information regarding evaluation, how it will be carried out, the definition of terms, or the criteria used for evaluation. And, very little information is given on the report card regarding the scale used for evaluation.

In elementary school, the report cards measured learning in many small parts with each part placed on the scale. For instance, Language Arts was subdivided into minor ideas and details. Each part was individually evaluated. The junior high report card had fewer subdivisions to be measured, while the senior high report card often just listed the subjects taught and evaluations.

The elementary report card appraised work habits, attitudes, socialization development, and effort in much more detail than either one of the other report cards. Many senior high report cards evaluated only subject achievement and others measure effort and achievement.

How much accounting each report cards has or how much accounting is at each level causes some problems with parents. I have met numerous parents of senior high students who complain that report cards tell them nothing or very little about their teenager. Often parents want the same kind and amount of reporting as they received as parents of elementary children. They feel more comfortable with volumes of bits of information. But the senior high report card did not give this.

Useful information to Parents

When the detail of a report card is studied carefully, an observer must question how much information on the report card, especially the elementary report card, is useful or even understandable or meaningful to parents. For example, the Alberta Education Mathematics Curriculum employed the following terms: numeration, operation and properties, measurement, geometry, and graphing. Four of these terms (geometry and graphing skills, numeration, operations, and measurement skills) are utilized by 25 (57%) of the elementary report cards.

However, there is a question of the definition of some of these terms. I did not know what "numeration, operations, or knowledge of number facts" meant. When I contacted a Ph.D. candidate in mathematics education, she did not know either. The Curriculum guide defined the terms by adding a number of details to each concept. But this information is not privy to the readers/receivers of the report cards.

There is a question of how informative these terms are to anyone but the teachers of Mathematics. I assume that parents believe they are being told something; but, what they are told is that they can not understand, nor should they concern themselves with understanding, the report card. Taken at face value - literally - the report card must be mystifying for most parents.

For example, one comment on a report card relating to effort I did not understand was, "Practicing self control." I do not know how this comment is related to effort. It seems to imply something sordid about the nature of human beings, or at least children. Furthermore, I don't know under what circumstances it might be "practiced." Is there a pedagogy involved? (Are teachers putting children in potentially frustrating circumstances just so they can practice self-contol?) As such, I do not think this comment useful to parents.

Summary

Work as a metaphor is very important in North American schools. School is work. It is not to be fun. It is related to time and effort. Work is an accountable metaphor that is to be weighed and measured. Time is an integral part of the work metaphor. Work and time are viewed from an industrial metaphor. Work is a cluster metaphor having the following metaphors within it: time, segmentation of knowledge, sequential learning and knowledge, and standardization. As a cluster metaphor, it will be discussed in more depth in the next chapter.

Another important metaphor found in the report cards is socialization. Socialization in North America is seen as an important mandate of schools. Socialization is also a cluster metaphor that incorporates the following metaphors: effort, social awareness, participation, respect for authority, self-control, and responsibility. Socialization must also be weighed and measured. Socialization will be discussed in greater depth in chapter nine. Finally, evaluation and judgment are very important metaphors seen in student report cards. Evaluation is the basis of what report cards are and do. But evaluation is defined very restrictively on the report card. This metaphor will also be examined in chapter nine.

CHAPTER 8

WORK: A MAJOR METAPHOR IN EDUCATION

Introduction

In the last chapter eight concepts were highlighted as being evident in the report cards. One concept can be viewed as a cluster because within it appears another four concepts. This major concept is work. Four minor concepts are intertwined within work: (1) time, (2) segmentation, (3) sequentiality, and (4) standardization.

This chapter is divided into two major parts. The first shows a historical development of the metaphor work. The perspective is an attempt to understand why work, work habits, and work skills are so important to report cards and how the four minor concepts are interwoven together historically. The second part of this chapter will attempt to understand the metaphor work as we define it in school, education, and our culture.

Historical Development of the Work Metaphor

Early Development of the Work Metaphor

When I examined the report card, I saw certain patterns and wondered where they originated? Why do we evaluate students the way we do? Why is work important and why is it defined the way it is? Why is learning seen as sequential and segmented? Why is school all about evaluation and judging? Why is the evaluation of subjects objective? Why do we use a mechanical scale? Why do parents put up with the lack of understandable criteria?

To begin with, I started by studying the term work. Has it changed its meaning? Has it developed in its meaning? And, has it added definitions to its meanings?

Two incidents occurred while I was analyzing student cards report. I was watching a T.V. program called "The Day the Universe Changed" when James Burke spoke about the change in the concept of work over the centuries. Second, I had already become very aware of the importance of work in student report cards. Burke notion of work intrigued me. Many hours later I had not found any historical information in any of the university libraries until I checked the Encyclopedia Britannia (1985, 1976). In both the Micropaedia and Macropaedia volumes, the term work was elaborated in great depth.

Later, I found the historical use of the term in the Oxford English Dictionary (1961). Work was first used in literature in 825 and later in 1290 as doing one's livehood. In 971, it was defined as an act or deed and in 1000 as a task or function. To get to work or beginning doing something was first used in 1377. The weaving industry first used it in 1382 as a task. In 1581, it was first used as an establishment where some industrial labor was carried on. And in 1582, it was incorporated in the iron industry. Shakespeare used the term in 1598 and again in 1601.

The meaning of the term work has changed and been added to throughout the centuries. Early in its history work was connected to the division of labor. This division of labor took several forms. Prior to the industrial revolution, work divided the labor of the sexes. For example, men hunted while women gathered wood, cooked, and "worked" in the fields.

Work was also seen as a divider of occupations. It divided people who hunted and planted from those who pursued the more specialized work of crafts, such as pottery making, textiles, and metallurgy (Britannia 1985:754). Later, work became even more specialized in its division of labor. Special occupations came into being and people were required to keep permanent records. Thus, writing and bookkeeping evolved.

Eventually, work also came to characterize the hierarchical class structures of king, noble, land owner, government officials, craftsmen, peasants, miners, and slaves (Britannia 1985:754). Early work depended on the skill of craftsman, rather than the equipment, to determine the quantity and quality of output. Thus, the concept of work as a divider of labor relating to sex, occupation, class, and slavery has been and still is an important aspect of our culture. It may be a world-wide concept, as well.

When small industries in the beginning of the Middle Ages became larger, these revised the organizational pattern of work and added different meanings to the definition of work. One such industry was the wool-cloth industry. While the industry remained in the home, work was carried on at the worker's pace. Children, cooking, weather, and farming were factors contributing to the time spent working on cloth (Britannia 1985:939). People working in the wool-cloth industry in their homes seeded their land in the spring and harvested it in the fall. While this work was being completed, weaving was set aside. This pattern of seeding and harvesting is not dissimilar to the lives of many women working in the home today. Housework is constantly disrupted by many incidents - child care and errands for the household. Farmers, too, still function like this.

The weaver decided how fast to work, how long to work, what breaks during the day were taken, and what holidays to take and how long to take them. The pacing of time was controlled by the individual weaver. Now, as well as work meaning the division of labor and the organization of labor, another feature had been added to its meaning - pacing or time.

Prior to the Middle Ages, time, according to Burke (1985:91), had no meaning as we perceive it today. People ate and slept when they felt like it and spent long hours on simple, mindless tasks without appearing to suffer boredom. Life was lived in a kind of perpetual present. Time in the modern sense did not exist between seasonal cues. Knowledge of the past was limited to memories of personal experience and there was little interest in the future. The rich man may have had a water clock or sun dial, but a watch-man also called out the hours from the church tower.

It was not until the 13th century, writes Burke (1978:130), that clocks became more than ornamental and seasonal. They certainly did not keep accurate time. The monks of the 5th century were the first to feel a need to use clocks for telling time more accurately. It became important for them to know the times for their numerous praying sessions throughout the day and night. In the 12th century the first mechanical clocks were used by the monks. These clocks did not give hourly time, but rather rang a bell for prayer times.

During the 13th century, astrologers started to recreate what happened in the sky on a controllable, human scale, and bring God's clockwork down to earth. The first clocks in large communities were twenty-four clocks using zodiac signs and calendars giving certain dates which were always religious in nature. These religious days were signals to the common people of seeding or harvesting time, market days, holidays, and major religious rituals.

Now for the first time, time was attached to work in a different form. Time was used to control people in their daily activities, such as when to plant or which was market day. Thus began the connection with work that was to take clocks out of the hands of the Church and into the town squares of Europe. By the 14th century, clocks were also used to open and close town and city gates, to indicate the beginning and ending of curfew and the starting and finishing of work, writes Burke (1978:130).

By the 15th century, time was linked to money. Clocks offered prosperity to a town because now merchants would come to the fairs, citizens would lead a more orderly life, and the towns gained a decoration. The clock was becoming an integral part of work, and time was connected with money. Money, time, and labor soon became intertwined with the concept of work (Burke 1978:130).

These definitions of work continued to change in the 16th century. In the metal-mining industry in central Europe specialization of labour began. Suction pumps of varying degrees of complexity were operated by specialized craftsmen or mechanics. The pace of work began to change. Miners operated five days a week, on a 24 hour basis, with the workday divided into three seven-hour shifts (Britannia 1985:940). The definitions of both time and work changed again. Time became more precise. Work became more regulated and was now out of the control of the worker. Time within the concept of work was now associated with hours per day and days per week.

Later Development of the Metaphor Work

Another change to the concept of work began in the 18th century with the advent of new machines. These machines compelled rational organization of job functions quite different from before. With these machines, for instance, in the manufacturing of pins, the processes could be broken down into 18 simple operations, each performed by semiskilled or unskilled labor. Productivity, greatly increased, depended far more upon the rational organization of processes than upon individual skill. The pace of work changed. Workers now had to work at the pace of the machines. Time had become more important to the concept of work because it was attached to the speed of machines. Also the concept of process has been added to work.

Josiah Wedgwood, a 18th century English potter factory owner, redesigned his factory with a view to economy of labour. Prior to this reorganization by Wedgwood, potters wandered from one task to another. Each potter completed a product. Wedgwood assigned people to a particular post and they worked at one task only. Of the 278 people working, only five has no assigned post; the rest were specialists. Each worker specialized on a particular phase of the production of a platter. This division of labor did not destroy the skill of the laborer, but rather it limited the skill to a particular task. These skills were improved with continued repetition. Wedgwood's pottery was superior to that of his competitors (Britannia 1985:940).

Wedgwood (Britannia 1985:940) had less trouble training his workers to do parts of a finished product than he had introducing them to a novel form of discipline that ran contrary to centuries of independence. It was a continual test to his ingenuity to enforce six hours of punctual and constant attendance upon the workers, to get them to avoid waste, to keep them from drinking on the job and from taking unauthorized "holidays." Wedgwood hired a hierarchy of supervisors and managers to monitor his workers. His workers resented their lack of independence of pacing their own work.

This brief history of time suggests how time and work are intertwined components with the modern concept of work. The concept time has changed in many ways. Time is now related to how long a person must spend on the job doing the task without any breaks. Meals and coffee breaks are scheduled time, not when the worker wants them. Modern time is a more precise term, very different from 12th century or even 14th century meaning.

Mass production was introduced in the 19th century and brought standardization by means of precision-manufactured and inter-changeable parts. The mass production process itself is characterized by mechanization, high volume, elaborate organization of materials flowing through various stages of manufacturing, careful supervision of quality standards, and minute division of labor. The assembly-line is a by-product of mass production. Stationary workers worked at a steady pace dictated by the machine, with a minimizing of unnecessary movement in dramatically increased productivity.

According to Henry Ford, the developer of the assembly-line concept, there are three simple principles to his concept: (1) the planned, orderly, and continuous progression of the commodity through the shop; (2) the delivery of work instead of leaving it to the workman's initiative to find it; and (3) an analysis of operations into their constituent parts (Britannia 1985:942).

These principles led to Frederick W. Taylor's scientific management field of study. From this new field of study came industrial engineering, scientific management, and efficiency experts. Taylor used the stop watch to time and analyze the separate movements involved in production relating to the production line and efficiency (Burke 1978:130). This study was to determine the best way for the worker to do the job, to provide the proper tools and training, and to provide incentive for good performance.

These studies are now called time-and-motion studies. They are used in the evaluation of industrial performance and the analysis of time spent going through the different motions of a job or series of jobs. Time-and-motion studies were widely adopted as a means of improving the methods of work by subdividing the different operations of a job into measurable elements. Such analyses were used as aids to standardize work and to check the efficiency of people, equipment and the mode of their combinations.

The concepts of time and work changed with Taylor's study. Time was used to analyze each separate movement involved in production with the view of efficiency and attitude. The task became how to get the worker to work faster with the least number of separate movements. Time was now even more closely tied into the concept of work, but tied differently. Two other concepts have been added to work: attitude and efficiency. Time and money have become more entwined as integral parts of work. The expression became "Time is money."

The Encylopaedia Britannia (1976) defines efficiency in mechanical terms. Efficiency is the ratio of the useful output to the input (usually power) of a machine or process. It is usually given as a percentage. An efficiency expert is one who analyzes methods, procedures, and jobs in order to devise means for securing maximum productivity of equipment and personnel.

The concept of attitude, states Britannia (1985) rises from the attempts to account for observed regularities in the behavior of individual persons. There are two views about how attitudes can be judged. One view is that the quality of one's attitudes is judged from the observable, evaluative responses a person tends to make. The second view is that attitudes are directly observable and must be inferred from behavior. There are, according to Encyclopaedia Brittannia (1976), three components of attitudes: 1) perceptual, 2) emotional, and 3) motivational attitudes. There are also three determinants of attitudes: hereditary factors, bodily state, and direct experiences.

Taylor assumed workers would submit without question to having standardization of physical movement and thought processes. He also assumed workers desired to be used efficiently, to perform their work with minimum of effort, and to receive more money. This philosophy proved incorrect (Britannia 1985:942). Taylor discovered a decline in both work quality and productivity. His findings gave rise to a new specialized occupation - industrial psychology. The major premise of industrial psychology is that mass production technologies affect the worker both in the immediate job environment and in relations with fellow workers and supervisors.

The brief history of the development of the concept work given above outlines how the term has become intertwined with time, efficiency, process, segmentation, specialization, attitudes, motivation, standardization, volume, sequentiality, and many other concepts. Time has become efficiency time, segmented time, scheduled time, profit time, controlled time, and precise time. Work is timed work, scheduled work, segmented work, efficiency work, profit work, machine work, controlled work, precise work, incentive work, standardization work, quantity work, process work, volume work, attitude work, and evaluated work. The report card seems to be consistent with the history of the concepts it contains. Today, outside of school in the workplace, each one of these terms relating to time and work defines a part of work and time also defines a notion of work and time. Each adjective describing time and work gives it a different view of the word.

Work: a Root-Metaphor in Education

How has the evolvement of the term work influenced school, the report card, the student, and the teacher? What features of work and time can be seen in schools? Each of the following developments of the concept of work will be examined and reflected upon as they relate to education: (1) occupation, (2) sex, (3) time, (4) segmentation, (5) sequentiality, (6) volume, (7) efficiency, (8) motivation, (9) standardization, and (10) new professionals.

Occupation

School, through its evaluation system, divides people for many purposes, including training for occupations. Students are syphoned off into various education programs which dictate what jobs or careers they will be capable of learning later on. These decisions are based on many factors, but the first one to be examined is how well the student is working in class. What marks does she/he have? Where does the student fit on the evaluation scale? These evaluative decisions are crucial determinants in a person's life. These decisions about students also create a hierarchical class structure.

Sex

Schools have typically divided work according to sex. In many schools, home economics is still taught only to girls, while boys learn industrial arts. Boys are expected to obtain better marks in mathematics and science and girls to do better in language arts and social studies. There are many men teaching social studies and language arts, but few women teach mathematics, science, and physics.

Time

Schools do not allow student time or student work. Schools have scheduled time and scheduled work. There are specific times to work on particular assignments. Student work is always controlled work. Students seldom pace their own work nor time their own learning. On one level of understanding, students do pace their own learning. They can refuse to learn what is taught, when it is taught. However, they will fail the assignment, subject, or grade. On other levels of comprehension, students do not pace their own learning.

The Department of Education and the individual teacher pace student learning. Students always work on assigned work. Typically, they do no more. They have choices about which one of five topics or which holiday to write about, but the choices are assigned. Time and work is controlled by others. Like Taylor's study, mentioned before, students don't always like what happens to them. One wonders if this is justification for educational psychology.

In our society, work and education are processes. It is more important to learn and understand the process than the countless details. Learning the process of writing, the process of organization through the outline, the process of war, the process of scientific experiment, the process of becoming a Ph.D., or the process of becoming a teacher are examples. I have studied comparative education courses in European and Third World countries. One of the major differences between the North American educational system and others is that we emphasize process to a greater degree.

Another important factor in education is time. Time in education and in school is very precise, segmented, and sequential. Students, teachers, schools, and education are expected to keep pace with time. All work and learning is timed.

Report cards divide knowledge into time. An examination of the various provincial curriculum guides indicates what kind of knowledge and how much knowledge is to be learned for each grade during one ten month period. A student passes or fails a grade or subject on the basis of whether or not a specific package of knowledge is learned in that period.

Time is valued very highly in schools. The school's time table is particularly evident in junior high. Here the day is divided into time segments, often 39/40/41 minutes in length with 2 or 3 minutes between classes. A school day could begin at 8:39 am and end at 3:16 pm. The first class ending at 9:25 and the second class beginning at 9:27. Not only do students change classes using this time table, they also change the subject to be learned. Student jump from science to social studies to physical education to drama in a single morning all to the tone of a bell.

In society, time and work are money. In school, time and work are marks. The entire educational system, report card process, and learning process is founded on this premise.

Time is a very important aspect of work and work habits. Teachers often link time to work and work habits. "You must be finished this assignment by 10:31 when the bell rings." "Stop wasting time, Bill." "This report is due Monday." "Sally, uses time effectively." "The spelling quiz is tomorrow." "Hurry up, we must be finished this unit of work by next Wednesday in time for the common examination." "I do not understand why you do not know about fractions, you took them last year."

Learning is measured by time. For instance, grade 6 means being in school for six years; therefore, one learns six years of knowledge. In reading tests, we grade students as to the year and month the student is reading. For example, 5.4 means a grade level of five years and four months. Even when adults are given reading tests the same criteria is used. How demoralizing it must be for adults returning to an educational institution to be told they are reading grade 5 and 3 months. Most adults understand this to mean that they are about as smart (or dumb) as a fifth grader. Could we not measure learning in some other way?

Another way we measure learning by time is seen in the provincial handbook for junior high and senior high. Junior high schools are instructed that there is a minimum of 950 hours of instruction at each grade level, with a minimum of 650 hours being allotted to core subjects and a minimum of 225 hours being allotted to complementary courses. In senior high school, subjects are assigned credits. Each core course is worth a specific number of credits. Each credit is assigned 25 hours of instructional time. Extension courses are assigned 13 hours per credit with a minimum of 32.5 hours of instruction for three credits.

Segmentation

Knowledge is segmented; education is segmented; and work is segmented. We believe we can only understand knowledge if it is segmented first. When I began to study report cards, first I segmented them into many parts. I developed categories and divided the categories. These categories appeared to be natural divisions within the report card. I developed tables using percentages in my attempt for understanding. Now I am attempting to understand the whole, because I feel I understand the parts. I understand the report card, but in a very precise way - from segmentation to a whole product. It was a very mathematical approach to understanding.

Report cards highlight the structure of school knowledge. Schools have subdivided the knowledge to be learned into segments. These knowledge segments are given names: Language Arts, Social Studies, Science, Physical Education, and Art. There is a knowledge overlap among all these subjects, yet they are taught in segments. For example, in social studies we need to know how to draw graphs, to read them, and to interpret them. This knowledge is taught in mathematics and science. When writing in social studies or science, we need to know how to write paragraphs and to know the grammar and spelling rules from language arts. Each subject is separated from others in a different class at a different time, often by a different teacher with no reference or practice for use in other disciplines.

Some may argue that report cards limit learning, suggesting that students rarely carry knowledge from one subject to another. Social studies teachers are always wondering why students cannot calculate percentage or draw a graph and science teachers wonder why students cannot write a paragraph with correct spelling and punctuation. Students suggest that they cannot calculate mathematics in social studies because percentage and graphs are not social studies.

Not only is knowledge segmented into subjects, it is also segmented within the subject itself. In mathematics, teachers teach fractions and percentages. Once again, students often do not transfer knowledge from fractions to percentages because they do not see connections. Language arts teachers teach spelling, reading, writing, and grammar. Often this too is taught separately and students do not see any relationship among the topics.

Alberta's Education's Curriculum Guides are segmented. Social studies is divided into grades, units per grade, then skill and knowledge objectives per unit. Education is divided into levels of education (elementary, junior high, senior high), grades, individual subjects per grade, and subject content per subject per year.

Each school year is broken into reporting periods. The subject is often taught by dividing the material into units, topics, or themes. The subjects are divided into academic and complementary, with academic subjects given more priority. Each subject is assigned a precise amount of time on the time table. These times are controlled by the Department of Education. Each day is segmented into "periods" or "classes," with time given for class changes, recess, and lunch.

The teacher divides the subject matter into learning components of what will be taught in a four or six week period, subdivides the matter into a week's lesson plans, and finally what will be taught in a single class. Each lesson is divided into three parts: introduction and motivation, body of lesson, and, finally, the summary or conclusion. A class should be partitioned into two parts: teacher instruction and student activity. Education is segmented.

Sequentiality

Knowledge is seen as sequential. Upon examining a curriculum guide from subjects like language arts and mathematics, the sequence is obvious. Not only is knowledge sequential from one grade to another, it is sequential within the grade itself. Some subjects are, however, more sequential than others. For instance, in elementary school social studies the sequence moves from community to the province to Canada and finally to the rest of the world. It moves from government to economics in junior high. Practically, however, it does not matter which unit comes first in junior high social studies. The sequence is very flexible.

However, subjects like mathematics have a more crucial sequence. Measurement is taught before geometry, and fractions are taught before percentage. In social studies, it does not matter if Latin America is taught in grade five or grade nine, if the textbooks are appropriate at their reading level. Of course, the level of understanding will be different in the two grades. But grade nine mathematics can not be transferred to grade five. In language arts, students learn how to write a sentence before writing paragraphs or essays.

Education is sequential. Students move from grade one to twelve sequentially. Each grade lasts ten months. Students are expected to move to the next grade every ten months. They move from one class to another in sequences prearranged by either the school or the individual teacher. For instance, on Monday the grade 7B's will move from science, to social studies, to physical education, to language arts, and then go home for lunch. This sequence occurs each Monday for the entire year. Bells ring to end one class and students walk to the next class without further instructions from their teachers.

Repetition is an important concept in education and can be seen in the various curriculum guides. Every teacher knows that content will be retaught, sometimes within the week, sometimes within the school year, and sometimes in the next grade. Repetition does not necessarily mean students did not learn it the first time because they were not paying attention. Some skills must be practiced many times before they are learned. The repetition concept is consistent with the development of industrialization.

School, like the business community, has a precise length of day, length of year, and a total length of years of employment. We expect students will go to school for a minimum of nine years. Each day has a specific number of minutes of class time and each week also has a specific number of minutes of class time (1460 minutes a week or 950 hours a year). Each subject has a minimum length of time to be taught per year. These times are set by provincial regulations. For instance, language arts is allotted 150 hours per year, mathemataics 100 hours, physical education 75 hours, science and social studies each 100 hours.

This schedule is not unlike the business community. Each is regulated by hours of work people are allowed to work per week before receiving overtime. School is regulated in terms of minutes, while the business community is regulated in terms of hours. I have worked in schools where school began at 8:32, with the first class beginning at 8:37. Each class was 40 minutes in length with two minutes between classes. Lunch was between 11:46 and 12:52. The last class ended at 3:12. The typical business day begins at 8:00 a.m., lunch is between 12:00 and 1:00, with work finished at 4:30.

Volume

Another metaphor prevalent in education is volume. Students are expected to learn "volumes" of information. Examination of curriculum guides for any subject will present an impressive volume of material that students are expected to learn. Not only are students expected to learn a distinct volume of knowledge in a given time frame, teachers must teach that specific volume of knowledge. Pressure is placed on teachers from a number of sources. Common examinations may be administered for each report card, mid year, or at the end of the year.

Provincial examinations are conducted for grade twelve. Achievment tests in language arts, mathematics, science, and social studies are administered once every four years to Alberta students at the grade 3, 6, and 9 levels. Enhancements to the the Achievement Testing are being proposed, including annual testing in language arts, mathematics, science, and social studies at the grade 3, 6,and 9 levels (Special Activities for 1988-89:5). Third, if the students and parents believe the knowledge has not been taught during the year, they add their pressure on the teachers and the schools.

Efficiency

Schools are mindful of efficiency. Our cultural vision of a classroom is one where student's desks are in rows with a space between each desk. There are several reasons for this arrangement of desks, but one of them is surely efficiency. Teachers often hand out materials to the first person in the row, who then pass the materials to the other students in the row. Materials coming back to the teacher are passed from the last person in the row to the first.

Often students do not leave their desks until the bell rings for a change of class. Desks in rows help students line up more quickly.

One of the positive characteristics of any teacher is an organizational ability. Perspective student teachers are taught to organize their lessons so that time is not wasted within a class period. The routine is routine. Prepare materials and copy handouts before class. Ensure there are textbooks for everyone. Arrange materials before the class arrives. Thread the film projector before class or have the students working on some assignment while the teacher is preparing the projector. Make prior decisions concerning mundane activities within the class, so that they are always done the same way with out "wasting time" during the class. Schools are efficiency conscious.

Schools are like giant assembly-lines on a factory floor moving at the best rate for efficiency and productivity (House: 1983). I've been part of staff debates about the length of a class period in relationship to the best length for the most learning. Efficiency was the hidden agenda. One teacher suggested that probably the only thing we really taught in school was time. So much emphasis was placed on it. Students must learn to keep pace with the clock and do it with efficiency.

Wedgwood was not the last person to find out people did not like their time regulated as to when they started and finished work, when they could have a "coffee break," or when they could have a holiday. These are still major concerns of schools. Report cards keep track of absents and lates. Some policies are elaborate with specific number of lates allowed before detentions, letters or phone calls to parents, or appointments with school administration.

Motivation

Wedgwood noted the need to encourage workers to want to work. Schools use elaborate incentive programs and policies to encourage students. Teachers are taught to begin each lesson with a motivational strategy, assuming that student must be coerced into motivatation. Numerous books and journal articles are devoted to teaching strategies. Teachers promote motivation using "strategies," some of which are negative and some which are positive. Parents are sometimes involved in a number of incentive programs both negative and positive. The structure of the schools begs the question - what is it that makes school so bad that students need to be motivated? Wedgwood took away the workers' independence and their ability to control themselves. Work became boring, uninteresting, and controlled. Work is now, throughout society, a negative word.

Taylor's scientific management field of study, according to Burke (1978:130), was designed to determine the best way for the worker to do the job, to provide the proper tools and training, and to provide incentive for good performance.

The same analysis has been completed numerous times in education. Universities train student teachers in these same concepts. Curriculum and instruction courses for each subject are taught to ensure that student teachers are knowledgeable about the best ways to teach students how to do a variety of tasks that they will do as future teachers. These courses include information about the proper tools and training for each of the subjects taught in schools.

Standardization

Taylor assumed workers would submit without question to standardization, efficiency, and to money. Taylor's philosophy proved incorrect (Britannia 1985:942). Educators seem to make these same assumptions, but may not know the history of work in the greater society. We may verbalize the wrongs of students working at their desks, not moving, doing individual work, not communicating with others except in controlled situations, listening and working, and asking permission to leave their desks or the classroom. But educational practice does not change. Taylor discovered a decline in both quality and productivity. Educators, too, have discovered a decline of both work quality and productivity. There are cosmetic changes, but no fundamental changes. The metaphor of work has been ingrained into our education thinking.

Standardization can be seen in other ways within schools. There is a standardization of knowledge at each grade and for each subject. Curriculum guides standardize what is to be taught and learned. Standardized tests are administered each year to students at the provincial, school, and grade level. These marks constitute a percentage of the grade or sometimes the entire grade for the report card. The marks are written on report cards in the forms of letters, percentages, numbers, and comments.

Each school district has its own standardization of marks. Most use a multiple grading system; but, within the system, the letter grades have the same percentage range and the letters used for grading effort, attitude, and work habits are common. The Junior-Senior High School Handbook lists the standardization of marks for the Rutherford Scholarship Fund. They are: A has a range of 80-100, B a range of 65-79, C a range of 50-64, and F a range of 0-49. This set of criterion of a scale is common among junior-senior high report cards. Each example attempts to ensure a standard product within education.

Grade twelve marks determine whether a student "should" register at a university, technical college, or join the work force. Each institution has its own entrance standards. These standards often include a particular grade level, particular subjects from school, and maybe a special entrance examination.

The control of standards has already been discussed previously under the heading of volume in regard to provincial achievement examinations, grade 12 examinations, and school, grade subject examinations. The need for the standardization of quality in schools seems to have a direct link to industrial mass production and assembly-line thinking beginning in the 19th century. The mass production and the assembly-line concept, which started in the latter part of the 19th century and early 20th century, sounds like a description of a school and a classroom of students.

Students working at their desks; teachers bringing the needed material for the task at hand; and students working at the pace of the clock. This clock may be timing the minutes per activity, per class period, or the year's clock of how much must be learned per year. Often students must ask permission to leave their desks to bring paper to the garbage pail. Garbage often includes work not done to the teacher's specifications. Students certainly must ask permission to leave the room whether it is for a drink of water or the washroom. At the end of the class, the whole group of student leave the class and make their way to the next room like a product on an assembly-line of a factory floor.

Support Professionals

The industrial community has a large group of people who are not workers on the assembly-lines. They work in the offices of the factories. Their jobs came about as the result of the development of the concept work and time within industrialization. These jobs include a hierarchy of supervisors and managers that monitor the workers.

Taylor's work introduced industrial psychologists. The major premise of industrial psychology is that mass production technologies affect the worker both in the immediate job environment and in relations with fellow workers and supervisors. Schools are surprisingly similar. Central offices include people who are not directed related to teaching, but play a role in the business of education. They include people like the superintendent, assistant superintendents, coordinators, specialists (reading, learning), accounting services, budget, substitute or supply teacher services, communication services, curriculum services, design construction, and counselling services. Schools have principals, assistant principals, librarians, counsellors, reading specialists, business administrators, secretaries, and caretaking staff.

One of the goals of schooling as stated in _Junior-Senior School Handbook: 1988-89_ is that students "acquire knowledge and develop skills, attitudes, and habits required to respond to the opportunities and expectations of the _world of work_ (vii). The role of senior high schools is for students to "acquire specialized knowledge, skills, and positive attitudes required for direct entry into the _work force_" (xii). (The underlining is mine.) Student report cards attest to these goals.

Summary

This chapter was divided into two parts. The first part was a historical investigation of the metaphor work. The second part demonstrated how work, as defined by our culture, is an integral part of student report cards, school, and education in general. Work is a root-metaphor of education. Work is also a root-metaphor of our culture.

There are many parallels between education and industrialization and between the student report card and industrialization. The report card reflects how our society views education. How we perceive and experience education through the metaphor "work" is seen in student report cards and in education. Not surprisingly, we in education practice many of the concepts dominate in industry. Industrialization is one of the dominant metaphors in our society and it is no surprise that it finds its way into schools. Chapter nine will explore other dominate metaphors in education.

CHAPTER 9

THE DEVELOPMENT OF OTHER METAPHORS IN EDUCATION

In order to evaluate students a school system must begin with some fundamental assumptions about what is important. My study of report cards suggests three such fundamental metaphors: (1) evaluation, (2) competition and winning, and (3) socialization. In this chapter each metaphor will be discussed from a philosophical basis, followed by a discussion of how it is viewed in education.

Evaluation

Scale: the Metaphor

Why are students evaluated the way they are? These evaluations seemed to be based on scales, but where did this idea originate? A scale is used to measure and to help us make up our minds, deliberate, and make practical judgments. It is part of the theory of deciding, writes Schon (1963).

The metaphor of the scale is as old as Plato and Aristotle. Plato suggested that a scale was a balancing of elements in the human soul, while Aristotle said it was the concept of the 'mean' - the 'balanced life' as in balanced education (Schon 1963:116).

Evaluate is a mathematics term meaning "to work out the value to find a numerical expression for" (Oxford English Dictionary: 1961). It was first used in 1842 in Physics and later in 1874 by Hegel in his paper "Hegel's Logic. Evaluation means "the action of apprising or valuing. A statement or calculation of value." It was first used by the insurance industry in 1755 and by commerce in 1804. Evaluative, as an adjective, was by employed by schools in 1927. Judgment is defined as "any formal or authoritative decision." It was first employed in 1225 as a pronouncement of a deliberate opinion and by Chaucer in 1386 (Oxford English Dictionary:1961).

Scale was first used in 1375 to mean "to balance to equal in weight." In 1480, it was employed to mean "consisting of a beam which is pivoted at the middle - each end a dish, or pan suspended." By 1593, it came to be used "as an attribute of justice" (Oxford English Dictionary: 1961). During the 17th century the scale came to be seen as a mechanical process, a particular form of the Newtonian machine. Definitions in recent dictionaries verify this idea. A scale is "a machine used to measure physical things ... a sequence of marks either at regular intervals or else representing equal steps used as a reference in making measurements ... an establish measure or standard...a progressive or graduated table of value, size etc." (Collins English Dictionary). Scales took two forms. The first suggests accounting, summing up, and comparing. The second implies the judicial process (Schon 1963:118).

Schon (1963) claims that three assumptions define the metaphor of scale. The first is that objects or ideas come to the weighing process ready to be weighed. They do not have to be created in order to be weighed. The question is not how they came to be, but how much they weigh in comparison to others.

A second assumption of the scale metaphor is that in the course of the weighing, objects do not change. As far as the scale is concerned, an object leaves as it arrives. If change occurs, the weighing does not cause it. One weighing does not affect the next. Each weighing is independent and self-contained (Schon 1963:121).

The third assumption on a balance scale is that things are weighed in twos. Deciding is always seen as a matter of choosing between two alternative, actions, sides, arguments, or inclinations. There must be opposition. It is usually never questioned whether these are true opposites or if there is a third possibility (Schon 1963:122). The model of the balance scale includes uncriticized assumptions of the givenness of alternative, the priority of evaluation over discovery, unchanging 'acts,' and deciding in twos" (Schon 1963:124).

Scale: the influence in Education

How has this metaphor of scale influenced education? Certainly it allows the idea of a report card. All report cards perform the same function: accounting, summing up, comparing, and judging. Elementary report cards are much more elaborate in their reporting to parents, but this elaboration specifically decreases with the junior high and senior high report card. The scale is the only basis of evaluation. The metaphor of scale is ubiquitous and, as such, scale influences all phases of education.

Three assumptions concerning scale have already been stated. The first is that objects or ideas come to the weighing process ready to be weighed. In education, attitudes, work habits, effort, social studies, science and religion are brought to the scale to be appraised. Students should be weighed. Curricula, textbooks, processes, systems, procedures all should be measured. The issue is never how they came to be evaluated or should they be measured, but how much they weigh in comparison to one another. It is assumed that the activities of school can and should be measured.

Evaluation is based on a scale perceived as a mechanical scale. A sequence of marks is shown at regular intervals. This scale may be represented as percentages (93%), letters (A, B, C, D, F or S, V.G., U), numbers (1,2,3,4,5), or words (excellent, satisfactory, unsatisfactory). But, the scale will always determine whether the student passes or fails. The scale will also indicate how well the students passed or how badly they failed; but, there is no other possibility. Passing and failing belong to the Yes/No perception of the world. There are no other alternatives. Schools and education will be given marks indicating their rating on the evaluation scale.

The issue is never how they came to be, but how much certain subjects weigh in comparison to one another. Why are some subjects more crucial than others? The five "core" subjects (Language Arts, Social Studies, Science, Physical Education, and Health and Personal Life Skills) are more important than the options (Drama, Art, Music, and Health). Language Arts is listed first on more report cards than any other subject (70%), followed by Mathematics (54%), Social Studies, Science, and Physical Education. Tables VI-15 and VI-16 contain further information. It is not unusual that passing or failing a grade is based only on the grades of the core subjects.

Teachers of the complementary subjects are seldom happy with the comparison to the core subjects. Their subjects are as important to them as the core subjects are to the core subject teachers, administration, and Department of Education. Often, these teachers' believe that their subject's philosophies differ from the core subject's philosophies and can not be judged on the same scale. Many want complementary subjects to be part of the evaluation process when making decisions about the passing or failing of students. I have often sat in staff meetings where these arguments raged. However, the comparison continues without thought about whether they should be compared or how they first were weighed in comparison to one another.

Schools evaluate. They do not debate how students came to be evaluated or even what is being evaluated. They don't debate about what it means to a person to be evaluated or compared with others. Schools focus the process on the decision rather than on the process of thinking about that decision. Hume, according to Schon (1963), says that we evaluate action, motives, or dispositions which are assumed as given for the purpose of evaluation. There is no reference to the process by which possible actions (statements) are formulated in the first place. They are somehow simply given for the analysis or evaluation.

Maybe the lack of justification for evaluation is a reason why so many teachers, parents, administrators, students, and theorists are unhappy with the report card in its present form and why some encourage other forms of report cards or other types of reporting. For example, a few school systems attempt conferencing with no report card and others use a no-mark report card. A few theorists question what should be evaluated (Parlett and Hamilton, 1976; Guba, 1981; Eisner, 1979; Owens, 1973; Wolf, 1975, 1979; Scriven, 1981; Stake, 1973 and 1975; and Popham, 1974). A few even question the process of deciding what is to be evaluated and how it should be evaluated.

The report card is a scale that compares one student to others. One has only to be in school the afternoon report cards are handed out to the students. First, there is the quick survey of one's own marks. This is followed by finding out what friends "got." Often one hears comments like, "I worked as hard as you, how come your mark is higher?" "I did just as good as you on the quizzes!" "Mr. Jones must like you!" Third, there is sometimes a trip to the teacher to question why the mark was "so low."

The report card scale is used by teachers and districts to compare their students with another districts. It is not unusual for a school or district to have an evaluation policy that a particular "Normal Curve" is to be used. Teachers are told how many students or the percentage of students that are allowed to have a particular letter grade or range of percentages.

The provincial Department of Education also uses the scale with the report card to evaluate individual schools and districts. And, after the provincial examinations have been marked, whether it be grade twelve or grade three, each district receives a rating of all the districts. This rating is placed on a scale. Each district sends to each of its individual schools a rating. Then, teachers receive their rating. The districts and individual schools are in competition with each other; they are being compared to one another. Report cards are the vehicles for keeping score: performing the same function: accounting, summing up, and comparing.

The Department of Education of Alberta spends millions of dollars each year evaluating students on what it considers compulsory student knowledge. This data is published in comparison form. Measuring curricula is a full-time job. Also, teachers are now in the process of being evaluated. There seems to be some clarity about what should be evaluated, but little thought about should there be evaluation? Students, teachers, and curricula exist. Therefore, they should be evaluated. They come to the scale ready to be weighed.

On a balance scale, things are weighed in twos. Usually, there are few questions about whether there are true opposites. Balance does not allow for a new third possibility, a fourth, or a even fifth possibility. Students pass or fail; there is no third possibility.

School subjects are broken into groups of twos: core subjects and options; academic and complementary; and matriculation subjects and non-matriculation subjects. Schools are categorized into academic and non-academic schools and universities and technical schools (colleges). We have good or bad teachers, good or poor students, and good and poor schools. De Bono (1973, 1979) suggests that we live in a Yes/No society allowing for no other alternatives. Things are measured on a lateral scale, which allow for no other views of evaluation other than on a mathematical scale.

Scale: Judgment in Education

Not only does education, schooling, teaching, and reporting perform the functions of accounting, summing up, and comparing but each are part of a judicial process. Each student is judged using several forms. One form is the passing or failing of a grade. In senior high school, individuals could pass or fail an individual subject. Judgement is accepted as part of evaluation.

Second, students are judged about what work roles they will perform in adult life. These future roles determine how successful they are on the scale. Very successful students can enter university or colleges; less successful students can enter technical schools or the work force as untrained workers.

These decisions may relate to the student's age or grade, but they are made primarily by teachers based on judgements of scale. These decisions will promote a student into a technical program within the school or at special schools, like the non-academic program at a senior high school or a technical program in junior high. Classes called Academic Challenge exist for students evaluated as superior and classes called Junior Adaptation Achievement exist for those who are not evaluated very high on the scale. The names of these "special" classes change with the school district and even the year of the program. But, these judgments do determine a child's future career or lack of career.

"The process of channelling students toward a particular type of career begins in the elementary schools, in which grading is based typically on the level of capacity for achievement" (The Encyclopaedia Britannica 1976:413). The fact that this statement comes from an encyclopedia, rather than from some radical polemic suggests the unquestioned nature of our educational system. Governments urgently need to prepare youth for gainful employment in industry as skilled workers, continues the Britannica (1976:413). In large educational centers, decisions are made at certain points in the life of students as to their future academic or non-academic lives, for example, grade 7 or age 15.

Education also makes moral judgments about the attitudes expressed by the students. When students are evaluated on their attitudes, schools, teachers, and society have already decided what attitudes are positive within our society. The scale to be used is already imposed by cultural mores and beliefs. Examining the report cards leads me to conclude that positive attitudes include: pride in one's work, cooperation with others, showing interest in work, displaying courtesy, understanding and obeying school rules, and behaving. Students were redundantly evaluated using these criteria.

Teachers spend much of their time making value judgments about students. They judge student's attitudes, effort, work habits, skills, and knowledge. These judgments are reported in parent interview and conferences, principal and teacher interviews, sometimes by outside authorities (policepersons and courts), and of course in the report card. Knowledge must also be constantly evaluated through assignments, quizzes, and examinations. The judging and evaluation begins with the first class in the morning and continues all day, even into the evening. This happens for ten months of the year for the life of the child as a student. Judging and evaluation is based on one type only - the scale. The scale is based on a mathematical, mechanical form.

Competition and Winning

Report cards show that the metaphor of the competition is important in schools. Competing and winning are important concepts in the evaluation system. The whole system of marks, grades and evaluation can be viewed from the bases of competition and winning as seen in sport and war. To know one's score is a direct reference to knowing how many points one has towards winning the game or the contest, the war. It is not unusual for students to want to know their score (percentage) during a reporting period. Often teachers send out interim report cards, especially to failing students, so that both the student and the parents know where the child stands in the competition, at the end of a report card period, of winning as well as how well they are winning or losing. Often students play with the same kind of fervor that drives them when they are one goal down with two minutes to go in their school basketball games.

Much of what is taught, for example, in physical education is related to competition and winning. The games taught like typical games are often competitive. Winning is important. Awards given at the end of a school year are often top heavy in sports. I taught in a school that for several years gave out only sports awards. It was thought that academics were above such behavior. The school now awards trophies to those students with high academic achievements, too.

I also taught in schools where two ceremonies were set aside for awards, one for sports and an other for all other awards including academics. The sports ceremony took place during the day with only the students. In the evening, when the parents were invited, the other awards were presented. Many of these awards were presented to students for academic achievements, others were given for non-academic subjects, library service, most improved student, Students' Union proficiency, merit awards, and citizenship awards. In total, the awards took several hours to present.

Schools and societies prize winners. They are given special considerations like scholarships, bursaries, recognition rosters, cups, and medals. We commemorate our student winners in award and graduation ceremonies.

But winning is important in the other ways as well. Winning means a student has passed the assignment, the test, the examination, and the grade. Failure of any of these means the student has not won the competition . Winning can become so important it does not matter how one wins, it only matters that one has won. Cheating or stealing of other people's material seems an acceptable alternative for many people if one can "win" doing it. As seen in the recent acheivement test scandal in Alberta. While not releasing students who stole the exams from blame, their actions must be understood in the pressure of a situation they did not create.

We encourage our students to make goals in September of year each relating to their behavior, marks, homework, and achievement. In Old English, according to House (1983), a goal meant an obstacle, boundary, or limit. Its use now also means a serious striving for achievement or an earnest contest that is akin to war. To score has come to mean one's performance on a test, as in a test score. Passing can be likened to winning as in sports or war. Winning and competition are important foundations in education.

Socialization

"Culture, according to The Encyclopaedia Britannica (1976:413), cannot be biologically inherited; it must be learned anew by each person.... Education may be thought of as the socialization process through which a person learns [her] his way of life.... Education is a form of human interaction.... It is a social act." The article goes on to say that "schools are, first of all, agents of cultural transmission.... Culture depends upon continuity.... Schools, in a cultural sense, are institutions created by society to transmit important knowledge and skills to the young.... Schools transmit values and beliefs."

Culture and the socialization of children within our school system can be examined through the report card. A central question is: is the school system performing its assigned task - of socialization? One basic premise for the existence of schools is that they are agents of cultural transmission. Schools exist to socialize children. Parents have the primary responsibility to socialize their own children, but the school helps. Schools teach children the values, morals, skills, and knowledge needed to live in this society at this time. Since the beginning of the 20th century, society has needed to educate a large population of people skilled in industry and the factory.

The function of socialization is especially important in elementary school. Each little item to be evaluated represents a point of socialization. The process is continued in junior high and to a lesser degree in senior high school. More of the elementary report card is devoted to the evaluation of socialization than other levels of report cards. Our society emphasizes having the right attitudes, the right effort, the right work habits, and the right knowledge. Without accepting and modeling these normative values, one does not pass.

Work, good attitude, and effort are important values in our society. Work has a definition unique to our culture. It refers to industrialization, to factories, and is tied to time. Both attitude and effort are tied to the value of work. They are sometimes ranked separately on the report card, but often they are ranked together under a title of Comment Code.

Work habits are defined in cultural terms. For example, in our 20th century culture having good habits means working independently, following directions, being attentive, completing tasks, using time effectively, and completing assignments. Socialization includes such values as respecting property and rights of others, being responsible, participating, being self-controlled, and being courteous. A good attitude includes taking pride in one's own work, being cooperative, understanding and obeying school rules, and behaving in school.

Working independently is a value taught in school. It was listed first by 64% of the elementary report cards under the heading of work habits/skills. But this term has a special school meaning. Often much of the time spent in school is spent working alone with textbooks, assignments, paper, and pen. Classroom desks are arranged in rows with space left between them to ensure students work independently. I have travelled through many schools and looked into their classrooms. It is unusual to see classrooms with other arrangements. Often the blinds will be drawn or the curtains pulled so there will no windows that distract students. Group work is often short term and sporadic.

Why are classrooms arranged in this way? Does this definition of independence fit the definition of independence of the business world? How many adults work in an independent situation like a classroom? Many adults work in groups, both small or large. The ability to work well in groups is evaluated very highly in many jobs and careers. Even in factories on an assembly-line floor the ability to work in groups is very important, if not imperative. So why do schools utilize this definition?

One answer might lie within the concept control. Teachers feel they must be in control both of the information and the students. Students are required to raise their hands before speaking, to ask permission before leaving the classroom for washroom privileges, to sharpen their pencils, or to leave their desks. Classroom control is very important. We teachers speak of it often as having control or not having control. Universities teach discipline techniques because control is a crucially concern for student teachers. Students teachers want recipes for classroom control. This anticipation for potential conflict also encourages the metaphor of the war or game. Students are seen a opponents or, even, as the enemy.

Another function of the socialization process is to teach students knowledge. Knowledge is the formal base of each class. It is taught formally each day in each subject and is constantly evaluated in a formal way. On elementary report cards, knowledge takes more than half of the space on the report card. Both junior and senior high reports use most of their space to appraise knowledge. This knowledge is culturally biased. In language arts, most stories and poems taught are western European or North American. Social studies is taught from a democratic perspective - a Canadian perspective of democracy. Almost three quarters of the social studies content is about Canada. Science is an important subject because our culture is founded on science and technology. Mathematics is primary to science. Education formalizes this socialization process.

Summary

This chapter reviewed four dominate metaphors found in education. Every aspect of education is evaluated using a precision tool that does not allow for any other evaluative form. It does not count if teachers are using other evaluative forms because report cards are not designed to reflect any other form. This tool is indicative of our industrial and scientific culture. Every evaluation leads to a judgement. The competition and winning metaphor is akin to evaluation. In order to compete and to win students and everything educational must be evaluated. Winning is "good," and cheating to win is acceptable as demonstrated in the steriod scandals in the sports world and recent provincial grade 12 finals in Alberta.

As stated before, socialization is a fundamental mandate of our schools. The form of socialization taught in our schools is uniquely Canadian and to some extent North American. In conclusion, there can be no other finding than that the report card mirrors the school which mirrors

Canadian culture. Our culture mirrors how we perceive and understand our world and our experiences in our world.

CHAPTER 10

UNDERSTANDING STUDENT REPORT CARDS METAPHORICALLY

Introduction

In the last nine chapters, I have examined metaphors and student report cards. Chapters 2-4 discussed the concept of metaphor and how metaphors impact education. Chapter five reviewed the literature of student report cards. Chapters 6-9 outlined metaphors that were evident in student report cards, schools, education, and Canadian culture by analyzing Alberta student report cards.

This chapter will dovetail a metaphoric understanding of metaphors to a metaphoric understanding of student report cards through a series of questions and answers. By spelling out the metaphors inherent in student report cards and elaborating the assumptions which flow from them, we can then examine their appropriateness in student report cards. The intent of this process is for critical analyses and critical reflection of student report cards and indirectly the classroom and education. Another intent is to raise our awareness that student report cards mirror our Canadian culture. Eight questions raised in chapter one will guide the format and structure of this chapter.

Eight Questions and Answers

1. How does theoretical work about the nature of metaphor help in understanding the nature of student report cards in Alberta?

This question demands the dovetailing of the theoretical nature of metaphor and an understanding of the nature of student report cards. The first part of this study examined a large number of metaphors and highlighted as many different aspects of metaphor as possible. Each metaphor about metaphors acted as a screen though which we looked at the nature of metaphor. Each filtered the facts about metaphor, suppressing some, emphasizing others. Each one brought forward aspects that might not be seen at all through another medium. These aspects are potentially powerful because they shift attitudes about the nature of metaphor.

Second, I examined student report cards with similar results. Student report cards were analyzed from as many different views as possible. This analysis uncovered a number of conceptual systems which were explored historically. Now, the task is try to understand these conceptual systems metaphorically.

Metaphors can be understood from four different layers, as metaphorically illustrated by the tulip bulb metaphor. The first is figurative language, the second is understanding metaphor's fundamental principles (how metaphor works), the third is conceptual metaphor, and the fourth is understanding that all language and cognition is metaphorical. In this study, figurative language did not apply and was not addressed. The second level was addressed using the following headings: (1) sort-crossing, (2) types of metaphor, (3) levels of comprehension of metaphor, (4) the process of metaphor, (5) stages in the life of metaphor, and (6) tension of metaphor.

Sort-crossing is one fundamental principle of metaphor. One example of sort-crossing featured in this study is the metaphor "evaluation (A) is student report cards (B)." To consider evaluation from the point of view of student report cards is to use student report cards as a microscope with which to view evaluation more closely and differently. There is a pretense that the two different things or sorts (evaluation and student report cards) share a similar name and similar qualities. There is no difference in kind, only in degree between evaluation-student report cards. Sort-crossing involves the pretense that the two different senses, evaluation and student report cards, are one. There is an "as-if" feature in sort-crossing.

Other sort-crossing examples found in this study are: education is student report cards; Canadian culture is student report cards; evaluation is scale; student report cards (education, and Canadian culture) are industrialization (winning, and competition); and industrialization is work (segmentation, sequence, volume, product, efficiency, profit, accountability, and time).

There are two types of metaphor. The first is epiphor which achieves its meaning by expressing experience that is parallel to the hearer-listener's experience. For me, the metaphors of competition, winning, industrialization, and evaluation express personal experiences in student report cards, in the classroom, in education, and in Canadian culture. These metaphors are epiphoric. Before this study I likely accepted these metaphors as ordinary language with little or no tensionality and no consideration of absurdity. These metaphors are not diaphors suggesting possibilities for experiences.

Interactive and transformation levels in the "levels of comprehension of metaphor" are very important. Placing the known characteristics of student report cards against those of industrialization provided new insights about both A and B. The concepts of student report cards and industrialization have both changed. This interaction between the two senses required me to make inferences and to draw implications about both. Student report cards employ many characteristics of industrialization, for instance, the evaluation of work habits, the evaluation of segmented knowledge, and the value placed on work time. Industrialization is viewed in North America as time, efficiency, volume, segmentation, sequentiality, motivation, standardization, and support professionals.

In understanding the metaphor "evaluation is scale," there is a transformation in the tenor (evaluation) and the vehicle (scale). The words themselves did not change, the concepts did. They were transformed. Evaluation in student report cards has only one meaning, the mechanical scale. All other forms of evaluation were not considered in student report cards. Scale, too, was now understood differently than before. Scale was now understood from its historical perspective and its metaphoric perspective. It is a very narrow base to use in evaluation of students. In the transformation of the metaphor, both came to mean the same thing - evaluation is scale.

There are three steps to be taken in the interpretation of metaphor. These are error, puzzlement-recoil, and resolution. For example, the first metaphor that struck me was that "student report cards are scale evaluations." At first I thought there must be an error. There must be other types of evaluation in student report cards. I often employed other forms of evaluation in my teaching career; or, did I?

Thus began the puzzlement-recoil step. I was agitated, uncertain, and puzzled by this metaphor. Upon reexamination of the review of the literature of student report cards, I discovered all sixteen types of evaluation were basically one type of evaluation. They were all variations of scale. My next step was to re-examine the eighty student report cards looking for other forms of evaluation. This, too, proved fruitless. Last, I researched the historical use of scale evaluation and the metaphorical understanding of the concept.

This last step was my attempt in resolution, the third step in interpreting a metaphor. I attempted to find a proper understanding of the metaphor "scale." For me, resolution took several weeks with much time and effort using two qualifiers. Communal was the first qualifier, the "common experiences" of students, teachers, student report cards, and education. The second qualifier was "private" with my own experiences in the classroom and with student report cards.

"Education is student report cards" is another metaphor to be addressed from the fundamental understanding of "stages in the life of metaphor." I suggest this a fresh metaphor. The first response by the reader-listener is denial of the metaphor and affirmation of the "literal truth" of the statement. If the affirmation and denial produces the required duality of meaning, this metaphor will enter the second stage of its life cycle.

This stage may last a very long time before the metaphor is accepted as a good description. Within this period, the original metaphor may develop in various ways. It may remain a diaphoric metaphor, move to an epiphor metaphor, or die. If there is a third stage, it will no longer be considered a metaphor, it becomes common language. Education will become student report cards. The metaphor becomes the thing. The sort-crossing becomes sort-trespassing. Education is student report cards becomes a myth; it is believed as fact.

Between the "tension" that exists between the tenor and vehicle are three types of metaphor. "Student report cards are Canadian culture" is an example of a fresh or radical metaphor. There is much tension between the tenor and vehicle. "Student report cards are evaluation" might be considered an example of an old or established metaphor. There is still a zone of tensionality between the tenor and vehicle. But, in the metaphor "industrialization is work" there is no tension. This metaphor does not produce any response. The "as-if" quality has disappeared.

Each of the above examples of metaphor and their placement in the six fundamental principles are attempts to understand metaphor and to understand student report cards from each of the principles. No one principle or metaphor is complete, nor does it represent the the best view of student report cards; but, each view of report cards lights up another perspective otherwise not seen.

The second level of metaphor is conceptual metaphor. It consists of the following concepts: (1) displacement of concept, (2) metaphoric and non-metaphoric, (3) cluster concept, (4) transformation theory, and (5) root metaphor. In this third layer of metaphor I have also included an awareness of what metaphor does. This part is divided into two parts, uses and misuses.

Metaphor shapes the way we think. In the metaphor "evaluation is scale," teachers, students, parents, administrators, and the general public think in terms of only one kind of evaluation in school. Other forms are not considered because only one form is dictated by student report cards. All other forms of evaluation are considered irrelevant.

Metaphor shapes what we experience. Students experience evaluation in only one form - scale. This form of evaluation is the only model presented to students. So they in turn will model what has been modelled. Scale is their only meaningful evaluation.

Metaphor shapes what we do. Teachers, schools, and the Department of Education spend considerable time developing tests for evaluating students using the same model of evaluation that they have always used. This is borne out by the review of the literature, the eighty student report cards, and documentation from Alberta's Department of Education. Metaphor is powerful.

Schon (1963) defines his "displacement of concept " metaphor as the carrying over an old theory to a new situation. This process shifts from old concepts to new situations. This process is not new to education. There are numerous examples. Competition with its beginning in commerce in 1793 and in law in 1624, is a dominant metaphor in education and in Canadian culture. I believe its importance in Canadian culture is more acceptable than its importance in education. But remember, education's mandate is to socialize children.

Winning was first used in 1320 when discussing conquering territory or the action of gaining, getting, or acquisition. It is a war, sports and political metaphor. Winning is also a dominant metaphor in education.

Standard comes from the Dutch and used in the 13th century as a standard of measure or weight. Standardization was first used in 1896 in medicine, in 1900 in law, and in mechanics in 1904. Once again education shifts these old concepts from their disciples to education without thought as to the ramifications to education.

Abstract concepts are all "cluster metaphors." The student report card is an example of an abstract concept which is a cluster concept. This concept consists of metaphoric concepts of winning, evaluation, segmentation, effort, social awareness, work, time, attitudes, socialization, and standardization. Each of these concepts are also metaphors. Each metaphor highlights certain aspects of the concept, student report cards. Other aspects of the cluster concept are not spotlighted by a particular metaphor. For instance, what is emphasized in the metaphor "winning" is not accentuated in the metaphor "social awareness." So, many metaphors are needed to grasp a fuller meaning of the concept, student report cards. Each part of this multi-faceted concept, student report card, allows us to understand student report cards in more than one way and thus permits understanding of many aspects of student report cards.

Metaphor creates facts and attitudes and provide us with definitions of what must be the essential qualities of an experience. They create their own data. Metaphors in "transformation" provide new ways of understanding, new perceptions, and a new language of thought. New metaphors create new theories and have their own new language. For me, this study of both metaphor and student report cards has provided new understandings, perceptions, and language of thought. If new metaphors were used to describe student report cards, there would also be new theories of student report cards and a new language to describe student report cards. One example of a new metaphor is "student report card is individual growth."

"Root-metaphors" are the most basic assumptions about the nature of the world or experience that we make when we try to give a description of it. The function of root-metaphors is to suggest a primary way to viewing the environment or experience. This way of looking at things assists us in expressing our insights. One such root-metaphor is "the world is mathematics." Therefore, people are mathematics. So, students are mathematics and should try to be capable of functioning in a 100% mechanical function. They can also be evaluated using a mathematical scale. Our student report card reflects this root-metaphor. The language of student report cards consists of mathematical and mechanical terms such as: effective time, capacity, efficiently, improvement, achievement, and potential. Subjects are segmented and sequential.

There are positive uses of metaphor and misuses of metaphor. Within Schon's "displacement of concept " metaphor, there is the "generative metaphor" concept. He sees the problem-solving process beginning with the problem-setting process. The solving is already known by what metaphors are chosen to describe the problem. Through the setting of the problem, there is a leap from fact to values, from "is" to "ought." At present in education, we "set" all of our evaluation problems from the scale metaphor. We describe evaluation using the language, attitudes, and understandings, perceptions of scale. Therefore, our answers are always scale evaluation. Since we are not aware of the metaphor when we set the problem, we are used by the metaphor, rather than using the metaphor.

The metaphors inherent in student report cards express our attitudes, express what we think about them, and how we make sense of the reality of student, classroom, school, education, and Canadian culture. Metaphors voice attitudes; they do not specify which attitudes are being expressed. However, our attitudes are announced by our choices of metaphors set forth in student report cards. Student report cards are statements of attitudes of winning and losing, competition, scale evaluation, and industrialization. These metaphors are expressions of what is important in Canadian culture.

By consciously selecting and criticizing the perspectives which shape our responses, we could use generative metaphor for critical analysis and critical reflection of student, classroom, and education policy. This analysis and reflection has three steps: the detection of the presence of the metaphors, the exposure of the metaphors, and the critical awareness of the metaphors.

Models are analogies. Analogies are metaphors. Student report cards can be viewed as a model of the student, classroom, education, and Canadian culture. If the model of student report cards is a symbolic model of students then we view students with the same attitudes as winning, competition, mechanical scale, and products from industrialization. We also view the classroom, education, and Canadian culture with the same attitudes, perceptions, understandings, and use the metaphoric languages imposed by those metaphors.

It must be remembered that any model is an interpretation, not the interpretation. The model of student report cards is not the only model of students. But it is a major model, because it is the model presented to students, parents, educational authorities, and society in general. Models describe and help us to understand complex systems, help us to see new relationships, and assist us in engineering programs.

There are several other uses of metaphors. In redesigning student report cards, other metaphors would suggest new concepts or at least reinterpret old ones.

Different metaphors could also suggest new functional relations. They could play a critical role in creativity in experimentation and tip the scales from confusion to insight. Different metaphors could result in new descriptions or choices between theories. They are the vehicles for linguistic change and permit the formulation and recognition of new relationships. Student report cards using different metaphors have the capacity to relate new knowledge to old. Because they do, they have pedagogical value.

We misuse metaphor when we are used by metaphor by taking the metaphor literally. When we believe evaluation must be scale, language arts must be segmented, school subjects must be segmented and sequential, work and time must have present definitions, and control is a prerequisite to "good teaching", we are being used by metaphor.

In conclusion, the understanding of the nature of student report cards is grounded in three layers of metaphoric understanding. They are the fundamental principles of metaphor, conceptual metaphor, and all words and cognition are metaphoric. Each metaphoric view of student report cards provides us with different understandings, attitudes, and perceptions. By focusing on a metaphoric understanding of student report cards, we can detect the presence of the metaphors, expose the metaphors, and become critically aware of the metaphors. This allows us to critically analyze and critically reflect on student report cards, students, classrooms, and education. We can use metaphor in change rather than be used by metaphor as we are now.

2. What metaphors exist in student report cards?

Several metaphors are found in student report cards. Each dominant metaphor is a cluster concept. The cluster concepts seen in student report cards are: work, evaluation, competition and winning, and socialization.

Within the cluster concept of work, there are metaphors of time, segmentation, sequentiality, volume, efficiency, motivation, standardization, evaluation, and work. Evaluation consists of the mechanical (mathematical) scale and judgment metaphors. Competition and winning includes the war and sports metaphors. While socialization utilizes the metaphors of work habits, right attitudes, effort, self-control, independence, cultural knowledge, working in groups, respect for property and people, winning, competition, evaluation, and industrialization.

3. What metaphors are hidden in student report cards?

There are many metaphors not in student report cards that may be in school, for instance, growth, organic, sculpturing, individual differences, progression, and art. These metaphors are not seen in student report cards but may operate in schools or individual classrooms.

Dr. Ted Aoki (ATA News March 13, 1989) suggests that we need curriculum that is "inspirited with soul." He urged curriculum developers to put soul into school curriculum and to allow it to come alive in the classroom. If soul is missing from the curriculum, it certainly is missing from student report cards. He claims that the problems of curriculum implementation are "curriculum imperialism." "Curriculum imperialism" calls for sameness throughout the province and doesn't allow for the nurturing of the interpretive powers of teachers and students. It is to be avoided. I suggest his comments can be applied to student report cards. Student report cards have "report card imperialism." Aoki suggests that curriculum developers are beginning to provide alternative understanding of the relationship between work and play. This understanding is not evident in student report cards. It is not there.

4. What metaphors are "out of focus" in student report cards?

The objectives, and goals metaphors are "out of focus" in student report cards. It is assumed parents and students know what objectives and goals are inherent in each evaluation score on the report card. It is assumed parents and students know what objectives and goals were taught for each subject and; therefore, evaluated for the report card. Since grades represent student progress in terms of a combination of objectives, teacher, parents, and students are never certain that each objective is being appropriately weighed. It is assumed parents and students know that growth and the assigned grade are not one and the same. At one level of comprehension, the metaphor of evaluation is "out of focus" in student report cards.

There are many concrete and faulty assumptions in student report cards. It is assumed that evaluation is good. Grades accurately reflect growth. Grades are a strong motivating factor to learn. Grades are a challenge for students to learn and do better. Competition is desirable. Grades accurately tell what is specifically being taught. Grades are descriptive and analytical of a student's work or comprehension of knowledge or concepts. Personal development and effort should be evaluated.

It is assumed that present grades clearly indicate to parents and students the student's present standing. But grades could mean the progress since the previous report. The high mark in a low ability group seams to mean the same as the identical mark in a high ability group. Marks from one teacher are interpreted the same as from another teacher. Good marks are presumed to be indicative of good work and low grades are indicative of poor work.

It is assumed grading on ability is congruous with everyday life; but, in fact, this type of grading rewards effort, and everyday life rewards accomplishments. It is not assumed that marks on report cards may be a function of the student's intelligence, sex, teacher, class, student's maturity level, or the effort students expend and the objectives they achieve.

5. What are the implications of the metaphors in student report cards ?

Metaphors often serve as ways of channelling action. They can constrain and sometimes dangerously control how we conceive education, students, the classroom, and student report cards. One of the dominant metaphors of student report cards is work. When questions to problems regarding student report cards are posed from this metaphor, the answers must be generated from the same metaphor. The metaphor used in discussing the problem already set the direction of the solution.

If the same problem is perceived from another metaphor, for example the growth metaphor, it will have a different answer. Each metaphor chosen to describe the problem conveys a very different view of reality and represents a special way of "seeing." Through this process of problem construction, there is a leap from fact to values, from "is" to "ought." Schon (1979) admonishes us to avoid being used by metaphors by becoming aware of the generative metaphors which shape our perceptions of educational phenomena. Being aware of generative metaphor becomes a tool for critical reflection when we attempt to solve educational problems.

6. What values were evident in student report cards?

The values evident in student report cards mirror the values in the schools, in the educational system, and our culture. Our society values time. Twenty-two percent of all elementary report cards work comments were time related and twenty-four percent of all junior high work comments were time related.

Second, we value "good work habits." Fifty-three percent of the elementary comments, 45% of the junior high comments, and 37% of the senior high comments were related to work habits. To have "good work habits" in elementary school, students must be able to work independently, follow directions, be attentive, complete tasks, do neat and careful work, and use time effectively. Good work habits in junior high included to be able to work well independently, work satisfactory, have satisfactory achievement, and use time effectively. In senior high, good work habits consisted of doing satisfactory/excellent work, complete assignments, and working to potential.

Efficiency was another value in student report cards. Twenty-one percent of elementary report cards had a comment related to efficiency, and fifteen percent of all comments in junior high were related to efficiency. In both levels of school, the efficiency was related to time.

Standardization was a fourth value of student report cards. It can be seen in the report card formate. Many districts had elementary, junior high, and senior report cards that were the same forms throughout the district. In other districts, individual schools developed their own report cards, but all report cards within the school were the same. Each district decided on the grading systems and evaluation criteria. Many of these evaluation criteria were the same for other districts as well. This standardization of marks came from the Rutherford Scholarship Fund, but were also the same for American schools as well.

A fifth value found in student report cards was evaluation. Every phase of student report cards contained evaluation and judgment. Student report cards also valued competition and winning. These values were fused in evaluation. Students, parents, and society were constantly being made aware of how well students were winning or how badly students were losing.

Good attitudes was another value of student report cards. Good attitudes included taking pride in one's own work, being cooperative, understanding and obeying school rules, and behaving in school. Nineteen percent of the elementary report cards, 35% of the junior high report cards, and 33% of the senior high report cards rated attitudes. In all, 21% of all report cards weighed attitudes.

The nineth value seen on student report cards was effort. It was rated using a letter scales, number rating, and a series of comments. Fifty-five of elementary report cards, 70% of junior high report cards, 33% of senior high report cards, and 51% of all report cards evaluated effort.

Working independently was a tenth value seen in student report cards. It was listed first by 64% of elementary report cards under work habits/skills.

Last, student report cards placed a value on knowledge. All student report cards evaluated knowledge. Not all knowledge was rated the same. The order of importance in elementary school was Language Arts, Mathematics, Social Studies, Science, Physical Education, Art, Music, Health, and French. It was very similar in junior high school. The order of importance was Language Arts, Mathematics, Social Studies, and Physical Education.

7. In what ways does an analysis of the metaphorical language used in student report cards reveal the world of schooling, education, and our culture more clearly?

Metaphors express attitudes; attitudes towards and attitudes about the social philosophy of our society. Metaphors express attitudes as well as expressing how we think about the world. Attitudes involve beliefs about objects and implicitly convey an evaluation of them. The way in which we identify something reflects our conceptions of it. An analysis of metaphorical language used in student report cards reflects our attitudes and beliefs about schools, students, and education. Schools, teachers, and education are responsible for the continuation of the socialization process begun by parents. This socialization has a Canadian and North American cultural basis. This basis centers around the metaphors of industrialization, competition and winning, and evaluation.

The way we use language determines the philosophy of our educational system. For instance, the eighty student report cards utilized only one type of evaluation - the mechanical scale. Evaluation in education had only one definition. No other types of evaluation implemented in school are important because student report cards do not authorize them. In the world of schooling this one metaphor - the world is mathematics, therefore, "students are mathematics" reveals much about schooling.

Practitioners have repertoires of examples, images, understanding, and actions of how to solve problems. When practitioners make sense of a situation they perceive to be unique, they see it as something already present in their repertoire. Educational theorists and practitioners have transferred the older evaluative metaphor to the new situation of different philosophies of education and of curriculum regardless whether the older evaluative metaphor is appropriate and contradictory to the new philosophies. Different philosophies demand different evaluation systems.

An analysis of the metaphorical language used in student report cards revealed a world of schooling as one dominated by metaphors of: one type of evaluation, competition and winning, work ethic, time, segmentation, sequentiality, volume, efficiency, standardization, cultural knowledge, and Canadian socialization. Other educational metaphors were not evident. The language of student report cards reveals the world of schooling, education, and our culture more clearly.

8. How is the student report card a "model" of our society?

In the comparison of student report cards metaphors and the metaphors dominant in our society, it is apparent that student report cards are a model of our society. The same metaphors appear in both. For example our society accepts the metaphors of work, time, standardization, sequentiality, volume, motivation, segmentation, evaluation, competition and winning, good attitudes, effort, self-control, independence, working as a group, and respect for property and people. The metaphor of evaluation is not always the "scale" metaphor, but evaluation is dominant in our society. Often other forms of evaluation are employed. There are other metaphors in our society that do not appear in student report cards, for instance, individualism, growth, personal worth, and community. It must be remembered that the model, student report card, is an interpretation of Canadian culture, it is not the interpretation.

Conclusion

A critical analysis of student report cards reveals that one metaphor dominates them. It is socialization - Canadian style. Socialization is a cluster concept consisting of several major metaphors. These are industrialization, evaluation, winning and competition. Industrialization is also a cluster concept. It consists of several major metaphors. These are work, time, segmentation, sequentiality, volume, efficiency, motivation, product, standardization and evaluation. Evaluation is defined with only one definition - mechanical scale.

There is much more to Canadian socialization than what was found in student report cards. There is much more to Canadian education than what was found in student report cards. Student report cards are a model of schooling, education, and Canadian culture. They perpetuate the myth. In this myth, we believe that what is contained in student report cards is fact. The ways we perceive them is the only way. This must be so, because we make cosmetic changes but no fundamental changes in student report cards.

CHAPTER 11

SUMMARY, IMPLICATIONS, AND DISCUSSION

Introduction

A social study of student report cards is a study of the whatness of student report cards. The purpose of this study was three fold. First, the study attempted to detect, expose, and critically reflect upon the presence of dominant metaphors found in student report cards. Second, the study attempted to understand how the metaphorical language used in student report cards revealed the world of schooling more clearly. Third, the study attempted to understand how student report cards reflected our society's cultural values through the dominant metaphors found both in student report cards and our culture.

The study is divided into three parts. In the first part, chapters 2-4 discussed the fundamental principles of metaphor, conceptual metaphor, and metaphors in education. Chapter five reviewed educational literature about student report cards. The second part, chapters 6-9, outlined metaphors that were evident in student report cards and education. The third and last part of this study discussed how student report cards act as a model of education. It was no surprise that the same dominant metaphor existing in student report cards were also dominant in Canadian culture.

This study might be classified as a hermeneutic anthropological study of Canadian culture using student report cards as the instrument for analysis. It is crucial to remember that this study is an interpretation of student report cards and a metaphoric exploration of metaphor in the social "arena" in which schools are a part. Each metaphor illustrates one view of the multi-faceted concept, student report cards. The study provides new understandings, new perceptions, and a new vocabulary of thought about student report cards. Metaphor is also a multi-facet concept. This section of the chapter is a review of each of the chapters beginning with chapter two.

Summary of the Chapters

To enhance the understanding of metaphor, I envisaged a tulip bulb with four layers. Each layer illustrated a layer of metaphoric meaning. Figurative language was represented on layer one, but it was not addressed in this study. Chapter two was a study of layer two, fundamental principles of metaphor. The idea of conceptual metaphor was probed in chapter three. Layer four of the tulip bulb highlighted the metaphoric principle that all language and cognition is metaphoric. It pervades the entire study.

Chapter two was represented on the tulip bulb metaphor as fundamental principles of metaphor. It was divided into two parts, a series of definitions and six fundamental concepts in the understanding of how metaphor works. To review briefly, there are six fundamental aspects. They are: (1) sort-crossing, (2) epiphor and diaphor metaphor, (3) four levels of metaphor which are substitution, comparison, interaction, and transformation, (4) three stages in the life of a metaphor which are sort-crossing, metaphor, and sort-trespassing, (5) three steps in interpreting metaphor which are error, puzzlement-recoil, and resolution, and (6) tension which consists of radical or fresh metaphor, old or established metaphor, and dead (frozen, fossil, faded) metaphor.

Conceptual theories of metaphor are reviewed in the third chapter and are represented on the third layer of the tulip bulb metaphor. This chapter was divided into seven conceptual sections. Concepts are metaphors. They shape the way we think, what we experience, and what we do. This statement is one of the foundations of my study. From the metaphors we use to describe education, we draw inferences, set goals, make commitments, and execute plans. It is very important what concepts are chosen for student report cards, school, and education. Each concept shapes the way teachers, students, and parents think, experience, and what they do.

The five concepts theories discussed in chapter three are: (1) displacement of concept theory, (2) metaphorical and non-metaphorical concept theory, (3) cluster concept theory, (4) transformation concept theory, and (5) root-metaphor theory. There are four major uses of metaphor : (1) figurative language, (2) displacement of concept metaphor, (3) generative metaphor, and (4) models. Metaphor can be misused too. There are five chief misuses: (1) sort-trespassing, (2) metaphors becoming myths, (3) generative metaphor, (4) conduit metaphor, and (5) models,

Metaphors in education are reviewed in the fourth chapter. There are several metaphors applied to education. Each one illuminates aspects of education and eclipses others. Not one of them is an educational metaphor. All of these metaphors have been imposed or chosen from elsewhere with little thought as to their implications on education. Some examples include the industrial metaphor, balance and scale metaphor , war and sports metaphor , and conduit metaphor. We evaluate education based on these dominant metaphors. Students, teachers, and programs are all judged from these metaphors. Student report cards are the main medium for evaluation of students.

Chapter five reviews the educational literature of student report cards. In chapter six, the physical contents of Alberta's report cards were analyzed. Student report cards were divided into four areas. They were (1) the generic superintendent's message, reporting student progress portion, number of reporting student periods per year, number of lates and absentees, and the need for parent/

guardian signature; (2) the evaluation of attitudes, effort, work habits, and teacher's comments; (3) the evaluation of school subjects taught; and (4) the promotion page which was not analyzed. There were 80 student report cards analyzed. Twenty-three tables were designed to analyze the student report cards.

From the analyzation of the 80 student report cards, eight concepts became apparent and were presented in chapter seven. These eight concepts were examined in more depth from the student report card perspective as to their involvement in student report cards. They were (1) work, (2) time, (3) socialization, (4) segmentation of knowledge, (5) sequential knowledge and learning, (6) standardization, (7) evaluation and judgment, and (8) useful and unuseful information.

In chapter eight, work was examined from a historical perspective. Out of this investigation comes an understanding of how "work" is defined in our culture and its importance in our culture. Work as it is culturally defined was then applied to Canadian education. It matched. Student report cards are a model of our educational system and our culture. By scrutinizing Alberta student report cards, we now have a different understanding of our culture. There are parallels between industrialization and education and student report cards and industry.

Evaluation using concepts like scale, winning, competition, and socialization are other dominant metaphors in education and our culture. These are addressed in chapter nine. The evaluation used in education is based on the metaphor of scale. Our culture demands the educational system socialize our children in Canadian culture. Canadian culture comprises of metaphors of industrialization, winning, competition, and evaluation metaphors. These metaphors are not the only ones found in Canadian culture, but these four dominate student report cards.

Chapter 10 dovetailed a metaphoric examination of metaphor and a critical analysis of student report cards. Each metaphoric concept was viewed through student report cards, education, and Canadian culture.

Implications of this Study on Education

Many people in education can benefit from a study of metaphoric language, especially one that detects, exposes, and engages in critical inquiry and critical reflection of the presence of dominant metaphors in student report cards. Some of these people include developers of student report cards and evaluation policy, curriculum developers, principals and staffs reviewing curriculum, school boards setting or maintaining policy, or teachers establishing their own evaluation systems.

Student report cards are one of the foundations of the classroom, of schooling, and of education. Not only are student report cards representative of what is considered important, they also predetermine what will be considered important. Teachers who are unit planning know they must incorporate an evaluation segment into their plans to fit both the demands of student report cards and the schedule of student report cards. Student report cards could be viewed as more important than curriculum. They could in fact be seen as the whole curriculum. Student report cards are ~~also~~ power. They are used by parents and teachers to control and manage student behavior.

Regardless of what metaphors ground curriculum, if these are counter to the grounding of student report cards the curriculum metaphors will be disregarded. For instance, at present Language Arts in elementary school in Alberta uses a holistic metaphor as its footing; but, student report cards evaluate Language Arts from the segmentation and scale metaphors. Teachers must disregard the holistic metaphor to meet the ultimatums of report card.

Many teachers and administrators accept student report cards as an unchangeable given. Yet, there are groups of teachers and districts who are interested in changing student report cards. From different sources I learn that teachers and some schools are interested in changing student report cards to fit their perceptions of schooling which embed metaphors other than those now present in student report cards. Other schools and many districts express an interest in moving to computer report cards. However, computer report cards do not represent a metaphoric change but a variation of what is already there.

Administration seems to consider such report cards are real change.

Real change in student report cards seems unlikely for two reasons. First, I believe there can not be significant change until those wanting change understand the deep structure of current student report cards. Second, even if administrators understood the deep structure that grounds student report cards they would probably agree with it. Student report cards mirror the educational feeling of our time.

To understand the concepts that ground student report cards, administrators must understand the metaphors that ground these concepts. At present those who want change are being used by the metaphors rather than using the metaphors. Student report cards are myths; we believe them. A myth mistakes the model for the thing described. We have come to believe that student report cards are the only literally true way that students can be evaluated. We are intolerant of other options in that we can not even consider them.

When we take metaphors literally, we are in danger of behaving as if something were true which is not true until we proceed to make it so. We behave according to the demands that the myths place on us. When I speak to friends about changing our evaluation idea, they tell me that we have always done it that way. It is a closed topic for them. They believe the myth. We, in education, continue to be unaware of the power of metaphor.

The first order of business calls for us to demythicize student report cards. If the language of metaphor replaced the language of myth, we would be less confident of the knowledge we possess about report cards and would become more humble and more willing to consider alternative avenues of investigation. We could examine other evaluation types by examining other metaphors that ground our educational philosophy and individual subjects. We would then be able to use evaluation systems if they are compatible with our personal educational philosophy. At present, the metaphor has captured us and we are unable to loose ourselves. But, the call to educators is to make the student report cards we use echo our conscious educational philosophy as well as what we value in our Canadian culture. At present I believe that student report cards mirror only a fragment of our educational philosophy and Canadian culture. This is not enough. A conscious effort to rethink evaluation is in order.

This study has attempted to demythicize student report cards. One choice is to retain report cards because we know and concur with the metaphors rooted in them. Second, we can decide to change them. But before we change, we must first examine our own philosophy and the root-metaphors inherent in it. Our purpose must be to use metaphor and not to continue to be used by metaphor.

Further Research

There are a number of possible spin-offs from this research project.

1. One important study would be a continuation of the study of metaphors and their application into education. Any child-centered metaphor based on growth, harmony, unfolding, assimilating, discovery and readiness would provide fertile metaphors to investigate. The knowledge-centered metaphors of store, foundations, stock, cells, bricks, and structure could also be used to build and construct analytical knowledge. The use of metaphors to build other visions of curriculum and educational objectives could be the start of other possible studies.

2. This study examined only student report cards; however, other areas could be critically appraised. The classroom, schools, curriculum development and design, other forms of evaluation and testing, Alberta's philosophy of education, Alberta of Education, and University of Alberta education departments all provide other areas of study. Each one of these areas could benefit from systematic evaluation. Metaphoric examination promises to highlight aspects of such everyday educational policy in radically new ways.

3. The development of new student report cards grounded

on other metaphors is another possible research project. One example is a student report card that is consciously and rigorously compatible with Alberta's philosophy of education. To complete this task, a metaphoric study of Alberta Education's philosophy of education is called for.

4. This research project has proceeded from only one point of view. Student report cards were viewed as curriculum documents sent from the printer to the classroom teacher. They were devoid of teacher evaluations or comments. This project saw curriculum as printed and delimited the idea of curriculum as used. Another far-reaching research project could understand report cards as curriculum in use. For example, such research might study student report cards from a student's outlook when the report card is received; from a parent's view when the report card evaluates the student; from the community horizon as a power broker for assigning economic or social status; from the post secondary education standpoint as it serves as a gate for further education; and from both Alberta Education's curriculum development and evaluation departments as student report cards evaluate provincial educational standards.

Evaluating student report cards as lived and used in interactive situations and communication would highlight the power and control that student report cards have. Such a social study promises a rich return for understanding the power of school and societal administration "over" the lives of citizens. This second study may even be a more fruitful study than this initial metaphorical analysis; however, it is necessarily a follow-up study.

5. The present evaluation system should be analyzed from the Alberta Education, various provincial school jurisdictions, schools, and classrooms stances. These stances could be made public and communicated openly to citizens.

6. Another research project would call for a continuation of other evaluation systems that might be implemented in education. Other evaluation systems exist besides mathematical scale. Smith (1981, 1982) suggests a number of possible metaphoric candidates but suggests that choosing wisely from among them may be difficult. Smith offers several criteria: relevance for evaluation function, sufficient definition, heuristic value, accessibility, non-duplicativeness, external to the project, and categorical soundness. There are also a number of other modes of inquiry for evaluation. Some include law, architectural design, geography, philosophical analysis, literary and film criticism, the novel, and watercolor painting.

7. A study could focus singularly on one subject area.

For example, Alberta's Department of Education and a number of jurisdictions are beginning to treat language arts as a holistic subject. What evaluation systems and what evaluation metaphors must be implemented on this focus on language arts? What should evaluation look like? An evaluational metaphoric study could help highlight specific evaluation policies for individual subject areas and help us understand these subjects better.

8. Finally, are other provinces using the same basic forms of student report cards? A comparison of Alberta student report cards with other provinces is another study. Further, how do other countries in the world evaluate students? Are there different myths at work in different cultures? Student report cards could be a way to help us in social studies understand global education more clearly.

Discussion of the Research

This research can be viewed from six different metaphors. They are (1) a celebration of the commonplace or mundane, (2) tensionality, (3) the metaphoric examination of student report cards, (4) change, (5) the whatness of student report cards, and (6) a social study of student report cards. When we rate educational concerns, student report cards are placed on the rim or maybe even outside the rim. Student report cards are invisible because they are so commonplace and mundane. This study has attempted to bring them to the center of inquiry and to a central focus. All other educational concerns are then seen from this new focus. This study is a "celebration of the commonplace."

Student report cards can be viewed as living in the "tensionality" of student report cards-as-planned and student report cards-as-lived. Student report cards-as-planned are the warp, the lengthwise thread through which the woof threads are woven. The warp is the formal document given to teachers to fill out later. This "un-used" document is the one I studied. Student report cards-as-lived are the woof threads that fill in the warp threads. The woof is the completed document filled in by teachers for students, parents, administrators, and society. Such a document lives in the community in all of its interrelationships. There is great tensionality between the warp and woof; between the student report card-as-planned and student report card-as-lived. A study of this tensionality would be fruitful for other educators.

Tensionality may also be seen another way. Student report cards-as-planned is a diaphor metaphor. It is a suggested experience. Student report cards-as-lived is an epiphor metaphor because it expresses an experience. We have all lived the student report card experience. There is a tensionality between the two.

The third metaphor is a metaphoric examination of student report cards. This study is a critical analysis and a critical reflection of student report cards. Its strength is in its revelation of Canadian education and Canadian culture, while its weakness is that it does not model these characteristics of education and Canadian culture openly. Student report cards continue to perpetuate a myth. They are believed as truth about students, evaluation, and education.

The root-metaphors within student report cards set the language, understandings, and attitudes of evaluation. Therefore, these same metaphors are very powerful because they set inferences and goals, make commitments, and execute plans in education. But, without examination, student report cards present too narrow a vision of students, classroom, education, and Canadian culture. This study has attempted to open up the vision of student report cards and present a different understanding of student report cards. How well this understanding is understood depends on how well we come to know student report cards, students, education, and Canadian culture.

This study has been about "change." We as educators can not meaningfully change student report cards until we know student report cards' strengths, weaknesses, and the metaphors that ground them. It is not enough to know about student report cards. We must know student report cards, especially the whatness of student report cards.

This study is also a "whatness of student report cards" study. It includes a study of each of the four metaphors listed above: a celebration of the commonplace, tensionality, change, and a metaphoric examination of student report cards. The study is also the study of a social study of student report cards. To understand the whatness of student report cards is to understand their complexity and to understand as many different "whats" as possible.

The last metaphor is " a social study of student report cards." This study is a anthropological study of Canadian culture. One facet of the multi-faceted Canadian culture has been critically analyzed and critically reflected upon. Student report cards model Canadian culture. The metaphors dominant in student report cards are inherent in Canadian culture.

Conclusion

Student report cards are believed to be the only model of evaluation. This point, obviously, is not true. By understanding student report cards differently, we can also comprehend our culture differently. To be cognizant of report cards, schooling, education, and our culture, it is important to understand and be critically reflective about this study on student report cards. Together they allow us a social study of student report cards. This study is not *the* interpretation of either student report cards, schooling, education, or our culture. It is *an* interpretation. This interpretation represents my best attempt at an anthropological, hermeneutic study of Canadian culture through the vision of metaphor.

BIBLIOGRAPHY

Altick, R. D. (1960). Preface to Critical Reading. New York: Holt, Rinehart and Winston.

Aoki, Ted. (1989). Soul needed in curriculum. ATA News. March 13.

Baker, R. (1981). "Pricks," and"chicks:" a plea for "persons." In Mary Vetterling-Braggin (ed.). Sexist Language: A Modern Philosophical Analysis. (pp. 161-182). U.S.A.: Littlefield Adam and Co.

Barfield, O. (1926). History in English Words. New York: George H. Doran Company.

Beardsley, M. (1958). Aesthetics. New York: Harcourt, Brace.

Berggren, D. (1962). The use and abuse of metaphor, I. The Review of Metaphysic. 16, Dec., 237-258.

Berggren, D. (1963). The use and abuse of metaphor, II. The Review of Metaphysic. 16, Mar., 450-472.

Berman, Samuel. (1943). Revising the junior high school report card. National Association Secondary School Principals Bulletin. 27, May, 49-62.

Black, M. (1963). Models and Metaphors. New York: Cornell University Press.

Boyd. R. (1979). Metaphors and theory change: What is "metaphor" a metaphor for? In A. Ortony (Ed.). Metaphor and Thought. (pp.356-408). Cambridge, England: Cambridge University Press.

Britannica. (1985). s.v. Attitudes.

Britannica (1985). s.v. Work.

Brown, D.J. (1970). Appraisal Procedures in the Secondary Schools. Englewood Cliffs: Prentice-Hall, Inc.

Brown, R. H. (1976). Social theory as metaphor. Theory and Society. 3 (2), summer, 169-197.

Brown, S. J. (1966). *The World of Imagery*. New York: Russell and Russell.

Burke, K. (1952). *A Grammar of Motives*. New York: Prentice Hall.

Burke, J. (1978). *Connections*. London: McMillian London Limited.

Burke, J. (1985). *The Day the Universe Changed*. Toronto: Little, Brown and Co.

Chansky, N. M. (1975). A critical examination of report cards from K through 12. *Reading Improvement*. *12* (3), 184-192.

Chapanis, A. (1961). Men, machines, and models. *American Psychologist*. *16*, 113-131.

Cheverst, W.J. (1972). The role of the metaphor in educational thought: an essay in content analysis. *Journal of Curriculum Studies*. *4* (1), 71-82.

Collins English Dictionary. (1986).

DeMott, R.M. and R. Fistler, (Oct. 1973). Reporting Continuous Progress. *Education of the Visually Handicapped*. *5*, 86-92.

de Bono, E. (1979). *Future Positive*. London: Maurice Temple Smith.

de Bono, E. (1973). *PO: Beyond Yes and No*. England: Penguin Books.

Billet, R. O. (1934). Provisions for individual differences, marking, and promotion. *North Central Association Quarterly*. *8*, Jan., 366-372.

Education, Social Aspects of.(1976). *The Encyclopaedia Britannica*. *6*, 413-416. 1976.

Eisner, E. (1979). *The Use of Qualitative Forms of Evaluation for Improving Educational Practice*. Occasional Paper #10. Edmonton: University of Alberta.

Embler, W. (1954). Metaphor and Social Belief. In S.I. Hayakawa (Ed.) *Language, Meaning and Maturity*. (pp.125-138). New York: Harper and Brothers.

Encyclopaedia Britannica. (1976). s.v. Education, social aspects of.

Giannangelo, D. M. (1975). Make report cards meaningful. Educational Forum. 39 (4), 409-415.

Gilman, D. A. (1974). The economics and psychology of the report card. Measurement and Evaluation in Guidance. 7 (3), 157-162.

Gordon, W.J.J. (1961). Synectics. New York: Harper and Brothers Publishers.

Gordon, W.J.J. (1971). The Metaphorical Way of Learning and Knowing. Cambridge: Porpoise Books.

Guba, E. G. and Y. S. Lincoln. (1981). Effective Evaluation. San Francisco: Jossey-Bass Publishers.

Haynes, F. (1975). Metaphor as interactive. Educational Theory. 25 (3), 272-277.

Hesse, M. B. (1966). Models and Analogies in Science. U.S.A.: University of Notre Dame Press.

Hester, M. B. (1966). Metaphor and aspect seeing. Journal of Aethetics and Art Criticisms. 25 (1), 205-212.

Hill, G. E. (1935). Report card in present practice. Educational Methods. 5 Dec., 115-131.

Hoffman, R. R. (1979). On metaphors, myths, and mind. The Psychological Records. 29, 175-178.

Hoffman, R.R. (1980). Metaphor in science. In Richard P. Honek and Robert R. Hoffman (eds.), Cognition and Figurative Language. (pp. 393-423). New Jersey: Lawrence Erlbaum Associates, Publisher.

Honeck, R.P. and R. R. Hoffman. (1980). Cognition and Figurative Language. Hillsday: Lawrence Erlbaum Assoc. Publisher.

House, E. R. (1983). How we think about evaluation. New Directions for Program Evaluation. 19, 5-25.

Hubbard, L.R. (1950). Dianetics: The Modern Science of Mental Health. New York: Hermitage.

James, L. Jr. (1969). Contemporary Approach to Nongraded Education. West Nyack: Parker Publishing Co.

Johnson, G. L. (Sept. 1976). Ideological Roots of Education Thought: A Study of "Borrowing" from Industry, The Military and Economic Theory. NCSS.

Junior-Senior High School Handbook 1988-89. (1988). Edmonton: Alberta Education.

Kirschenbaum, H., R. Napier, and S. B. Simon. (1971). Wad-ja-get? New York City: Hart Publishing Company, Inc.

Lake, G.J. (1975). Levels of Creativity: an illustrative example. Journal of Creative Behavior. 9 (1), 19-22.

Lakoff, G. and M. Johnson. (1980a). Conceptual metaphor in everyday language. The Journal of Philosphy. 77 (8), 453-486.

Lakoff, G. and M. Johnson. (1980b). Metaphors We Live By. Chicago: University of Chicago Press.

Lakoff, G. and M. Johnson. (1981). Conceptual Metaphor in everyday language. In Mark Johnson (Ed.), Philosophical Perspectives on Metaphor. (pp.286-325). Minneopolis: University of Minnesota Press.

Langer, S. K. (1957). Philosphy in a New Key. Cambridge: Harvard University Press.

Lawton, D. (1984). Metaphor and the curriculum. In William Taylor (Ed.) Metaphors in Education. (p.p.79-90). London: Heinemann Educational Books.

Leary, J. L. (1975). "The grading controversy: how do you meet it?" Educational Leadership. 33 (1), 25-27

Lewis, J., Jr. (1969). Contemporary Approach to Nongraded Education. West Nyack: Parker Publishing Company.

MacCormac, E. R. (1971). Metaphor revisited. Journal of Aesthetics and Art Criticism. 30, 239-250.

MacCormac, E.R. (1972a). Language machine and metaphor. Philosophy of the Social Sciences. 2, 277-289.

MacCormac, E.R. (1972b). Metaphor and Literature. The Journal of Aesthetic Education. 6 (1-2), 57-70.

MacCormac, E.R. (1976). Metaphor and Myth in Science and Religion. Durham: Duke University Press.

Mac Rae Donald G. (1975). The body and social metaphor. In Jonathan Benthall and Ted Polhemus (Eds.), The Body As a Medium of Expression. (59-73). London: Allen Lane.

McCarthy R.J. (1967). How to Organize and Operate an Ungraded Middle School. New Jersey: Prentice-Hall. Inc.

Mannello, G. (1969). "Grades must go." Educational Record. 50, 305-308.

Miall, D. S. (1979). Metaphor as a thought process. Journal of Aesthetics and Art Criticism. 38, 21-28.

Miller, R. M. (1976). The dubious case for metaphors in educatonal writing. Educational Theory. 26 (2), 174-181.

Muller, M. (1868). Lectures on the Science of Language II. London: Longmans, Green, and Co.

Nagel, E. (1961). The Structure of Science. New York: Harcourt, Brace and World.

Nemetz, A. (1958). Metaphors: the daedalus of discourse. Thought. 33, 417-442.

Ortony, A. (1975). Why metaphors are necessary and not just nice. Educational Theory. 25 (3), 45-53.

Ortony, A. (1976). On the nature and value of metaphor: a reply to my critics. Educational Theory. 26 (4) 395-398.

Ortony, A. ed. (1979). Metaphor and Thought. New York: Cambridge University Press.

Ortony, A., R. E. Reynolds, and J. A. Arter. (1978). Metaphor: theoretical and empirical research. Psychological Bulletin. 85 (5), 919-943.

Osborn. M. M. and D. Ehninger. (1962). The metaphor in public address. Speech Monographs. 29 223-234.

Owens, T. (1973). Educational Evaluation by Adversary proceedings. In E. House (ed.). School Evaluation: The Politics and Process. Berkeley Cal.: McCutchan.

Parlett, M and D. Hamilton. (1976). Evalaution as illumination. In D. Tawney (Ed.). Curriculum Evaluation: Trends and Implications. London: School Council Publications.

Pepper, S.C. (1935). The root metaphor theory of metaphysics. The Journal of Philosophy. 32 (14), 365-374.
everyday language. In Mark Johnson (Ed.),

Pepper, S.C. (1948). World Hypothesis: A Study in Evidence. Los Angles: University of California Press.

Perrine, L. (1971). Four forms of metaphor. College English. 33,125-138.

Popham, W. J. (Ed.). (1974). Evlatuion in Education: Current Applications. Los Angeles: University of California.

Rapoport, A. (1953). Operational Philosophy. New York: Harper and Brothers Publishers.

Reddy, M. J. (1979). The conduit metaphor- a case of frame conflict in our language about language. In Andrew Ortony (ed.), Metaphor and Thought. (pp.284-324). London: Cambridge University Press.

Roelfs, R.M. (1955). Reporting pupil progress in the junior high school. Education Administration and Supervision. 410 Dec., 485-487.

Ross, S. (1981). How words hurt: attitudes, metaphor, and oppression. In Mary Vetterling-Braggin (ed.), Sexist Language: A Modern Philosophical Analysis. (pp. 194-213). U.S.A.: Littlefield, Adams and Co.

Ryan, S. B. and R. E. Ryan. (Fall, 1973). Report cards? Why not ask the parents? Teaching Exceptional Children. 6, 34-36.

Sacks, S. ed. (1980) On Metaphor. Chicago: the University of Chicago Press.

Sapir, J. D. (1977). The anatomy of metaphor. In J. D. Sapir and J. C. Crocker. (Eds.), The Social Use of Metaphor. (pp.3-32). U.S.A.: University of Pennsylvania Press.

Scheffler, I. (1964). The Language of Education. Illinois: Charles C. Thomas.

Scheffler I. (1968). The Language of Education. Springfield: Charles C. Thomas.

Schon, D. A. (1963). Displacement of Concept. London: Tavistock Publications.

Schon, D.A. (1979). Generative Metaphor: A Perspective on Problem-Setting in Social Policy revised Programs. In Andrew Orton (Ed.), Metaphor and Thought. (pp.254-283). London: Cambridge University Press.

Schon, D.A. (1983). The Reflective Practitioner. New York: Basic Books Inc. Publishers.

Scriven, M. (1981). Evaluation Thesaurus (3rd. Ed.). Inverness, Cal.: Edge-Press. 4-5.

Shibles, W.A. (1971). *An Analysis of Metaphor in the Light of W.M. Urban's Theories*. Paris: Mouton.

Shibles, W. A. (1974). The metaphorical method. *Journal of Aesthetic Education*. *8* (2), 25-36.

Silberman A. (March 1972). How Report Cards Can Harm Children and Mislead Parents. *Ladies Home Journal*. *89*, 72 ff.

Smith N.L. (Ed.) (1981). *Metaphors for Evaluation: Sources* of New Methods*. Beverly Hills: Sage Publications.*

Smith N.L. (Ed.) (1982). *Communication Strategies in Evaluation* Beverly Hills: Sage Publications.

Special Activities for 1988-89. (Feb. 1989). Edmonton: Alberta Education.

Stake, R.E. (1973). Measuring what learners learn. In E.R. House (Ed.). *School Evaluation: The Politics and Process*. Ca.: McCutchan.

Stake, R.E. (1976). Evaluating educational programmes for economic co-operational deveopment.

Stanford, W. B. (1972). *Greek Metaphors Studies in Theory and Practice*. New York: Johnson Reprint Corp.

Stanford, W. B. (1972). *Greek Metaphors Studies in Theory and Practice*. New York: Johnson Reprint Corp.

Taylor W. (Ed.). (1968). *Metaphors of Education*. London: Heinemann Educational Books.

Taylor, W. (1984). Metaphors in educational discourse. In William (Ed.). *Metaphors of Education*. (pp.4-20). London: Heinemann Educational Books.

Terwilliger, J. S. (1971). *Assigning Grades To Students*. Glenview: Scott, Foreman and Company.

Turbayne, C. M. (1970). *The Myth of Metaphor*. South Carolina: University of South Carolina Press.

Vars, G. (1983). Missiles, marks and the middle level student. *NASSP Bulletin*. *67* (463), 72-77.

Verbrugge, R.R. and N.S. McCarrell. (1977). Metaphor Comprehension. Cognitive Psychology. 9, 494-533.

Verbrugge, R. R. (1980). Transformation in knowing: a realist view of metaphor. In Richard P. Honek and Robert R. Hoffman.(Eds.), Cognition and Figurative Language. (pp.87-125). New Jersey: Lawrence Erlbaum Associates, Publisher.

Walling, D. (1975). Designing a "report card" that communicates. Educational Leadership. 32 (32), 258-260.

Wheelwright, P. (1954). The Buring Fountain: A Study of the Language of Symbolism. Bloominton: Indiana University Press.

Wheelwright, P. (1962). Metaphor and Reality. Bloomington: Indiana University Press.

Wise, R. I. (1975). The responsibilities of grading. Educational Leadership. 32 (4), 253-256.

Wolf, R.L., and G. Arnstein. (1975). Trial by jury: A new evaluation method. Phi Delta Kappan. 57 (3), 185-190.

Wolf, R.L. (1979). The use of judicial evaluation methods in the formulation of educational policy. Educational Evaluation and Policy Analysis. 3 (1), 19-28.